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=> s Eucalyptus grandis and (caffeic acid O methyltransferase or cOMT)
L1 6 EUCALYPTUS GRANDIS AND (CAFFEIC ACID O METHYLTRANSFERASE OR COMT)

=> dup rem l1
PROCESSING COMPLETED FOR L1
L2 6 DUP REM L1 (0 DUPLICATES REMOVED)

=> d bib abs 1-
YOU HAVE REQUESTED DATA FROM 6 ANSWERS - CONTINUE? Y/(N):y

L2 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:1175748 CAPLUS <<LOGINID::20061117>>
DN 143:433723
TI Promoter sequences, compositions and methods for modification of gene expression in transgenic organisms
IN Perera, Ranjan; Rice, Stephen; Eagleton, Clare; Wood, Marion; Visser, Elizabeth
PA Arborgen LLC, N. Z.
SO U.S. Pat. Appl. Publ., 122 pp., Cont.-in-part of U.S. Ser. No. 137,036.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 8

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2005244968	A1	20051103	US 2004-927641	20040827
US 6380459	B1	20020430	US 1999-276599	19990325
WO 2000058474	A1	20001005	WO 2000-NZ18	20000224
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
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US 6596925	B1	20030722	US 2000-598401	20000620
WO 2001098485	A1	20011227	WO 2001-NZ115	20010620
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
ZA 2001007442	A	20020312	ZA 2001-7442	20010910
US 2003101478	A1	20030529	US 2002-137036	20020430
WO 2003093475	A1	20031113	WO 2003-NZ76	20030430
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
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PRAI US 1999-276599	A2	19990325		
US 1999-146591P	P	19990730		
WO 2000-NZ18	A	20000224		
US 2000-598401	A2	20000620		
US 2000-724624	B2	20001128		
WO 2001-NZ115	A	20010620		
US 2002-137036	A2	20020430		
WO 2003-NZ76	A	20030430		

AB Novel isolated plant polynucleotide promoter sequences are provided, together with genetic constructs comprising such polynucleotides. Methods for using such constructs in modulating the transcription of DNA sequences of interest are also disclosed, together with transgenic plants comprising such constructs. The examples describe the isolation and characterization of promoters from Pinus radiata and ***Eucalyptus*** ***grandis*** genes. Included are root, flower, xylem, meristem, bud, pollen and leaf-specific promoter sequences, and promoters from genes encoding homologs of various known proteins. One of the identified sequences was a promoter from a putative super ubiquitin gene from P. radiata.

L2 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:98977 CAPLUS <<LOGINID::20061117>>
DN 142:192341
TI ***Eucalyptus*** ***grandis*** ***caffeic*** ***acid*** ***O*** - ***methyltransferase*** gene promoter and methods for the modification of gene expression in vascular tissue
IN Perera, Ranjan; Rice, Stephen James; Eagleton, Clare Katherine
PA Genesis Research and Development Corporation Limited, N. Z.; Rubicon Forests Holdings Limited
SO U.S. Pat. Appl. Publ., 82 pp., Cont.-in-part of U.S. Ser. No. 291,447.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 8

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2005026162	A1	20050203	US 2003-702319	20031106

US 6380459 B1 20020430 US 1999-276599 19990325
WO 2000058474 A1 20001005 WO 2000-NZ18 20000224
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
US 6596925 B1 20030722 US 2000-598401 20000620
ZA 2001007442 A 20020312 ZA 2001-7442 20010910
US 2003101478 A1 20030529 US 2002-137036 20020430
US 2003091981 A1 20030515 US 2002-291447 20021108
PRAI US 1999-276599 A2 19990325
US 1999-146591P P 19990730
WO 2000-NZ18 A2 20000224
US 2000-598401 A2 20000620
US 2000-724624 B2 20001128
US 2001-345397P P 20011109
US 2002-137036 A2 20020430
US 2002-291447 A2 20021108
US 2002-425087P P 20021108
WO 2001-NZ115 W 20010620

AB The invention claims vascular tissue-specific plant polynucleotide promoter sequences and genetic constructs comprising such polynucleotides. Specifically, the invention claims sequences for ***Eucalyptus*** ***grandis*** ***cOMT*** (***caffeic*** ***acid*** ***O*** - ***methyltransferase***) gene promoter, which is involved in lignin biosynthesis. The invention further claims methods for using such constructs in modulating the transcription of DNA sequences of interest, together with transgenic plants comprising such constructs. Eucalyptus gene ***cOMT*** promoter activity was demonstrated in transfected Zinnia elegans mesophyll cells using the GUS reporter gene. Vascular tissue-specific expression of the promoter was shown in transgenic Nicotiana benthamiana using an OMT promoter-GUS construct.

L2 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:612477 CAPLUS <<LOGINID::20061117>>
DN 141:135240
TI Sequences of vascular-preferred promoter sequences and use in woody plants
IN Phillips, Jonathan; Eagleton, Clare
PA Arborgen, LLC, USA
SO U.S. Pat. Appl. Publ., 32 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 8

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2004146904	A1	20040729	US 2003-703091	20031107
PRAI US 2002-425087P	P	20021108		

AB The invention provides seven vascular-preferred promoters from ***Eucalyptus*** ***grandis*** . Methods for using the inventive constructs for regulating gene expression are provided, along with transgenic plants comprising the inventive constructs.

L2 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:414146 CAPLUS <<LOGINID::20061117>>
DN 139:2111
TI Regulated promoters of timber trees and their use in the expression of foreign genes in the manipulation of timber properties
IN Perera, Ranjan; Rice, Stephen; Wood, Marion; Eagleton, Clare; Visser, Elizabeth
PA Genesis Research and Development Corporation Limited, N. Z.
SO U.S. Pat. Appl. Publ., 122 pp., Cont.-in-part of U.S. Ser. No. 724,624
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 8

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2003101478	A1	20030529	US 2002-137036	20020430
US 6380459	B1	20020430	US 1999-276599	19990325
WO 2000058474	A1	20001005	WO 2000-NZ18	20000224
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US 6596925	B1	20030722	US 2000-598401	20000620
WO 2001098485	A1	20011227	WO 2001-NZ115	20010620
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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
ZA 2001007442	A	20020312	ZA 2001-7442	20010910
WO 2003093475	A1	20031113	WO 2003-NZ76	20030430
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
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AU 2003222535	A1	20031117	AU 2003-222535	20030430
BR 2003009870	A	20050426	BR 2003-9870	20030430
US 2005026162	A1	20050203	US 2003-702319	20031106
US 2005244968	A1	20051103	US 2004-927641	20040827
PRAI US 1999-276599	A2	19990325		
US 1999-146591P	P	19990730		
WO 2000-NZ18	W	20000224		
US 2000-598401	A2	20000620		
US 2000-724624	A2	20001128		
WO 2001-NZ115	W	20010620		
US 2001-345397P	P	20011109		
US 2002-137036	A	20020430		
US 2002-291447	A2	20021108		
US 2002-425087P	P	20021108		
WO 2003-NZ76	W	20030430		

AB Promoter regions from a no. of regulated genes of Pinus radiata and ***Eucalyptus*** ***grandis*** are identified for use in the regulation of foreign gene expression in timber trees. The regulatory DNA regions include constitutive promoters (i.e., from the Super ubiquitin gene), tissue-specific promoters (i.e., specific for leaf, root, flower, pollen, bud, and meristem expression), and temporally regulated promoters (i.e., for xylogenesis). Methods for using such constructs in modulating the transcription of DNA sequences of interest are also disclosed, together with transgenic plants comprising such constructs.

L2 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2001:935777 CAPLUS <<LOGINID::20061117>>
DN 136:65255
TI Plant gene promoters for the modification of gene expression
IN Perera, Ranjan; Rice, Stephen; Eagleton, Clare; Lasham, Annette
PA Genesis Research & Development Corporation Limited, N. Z.; Fletcher Challenge Forests Industries Limited
SO PCT Int. Appl., 121 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 8

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001098485	A1	20011227	WO 2001-NZ115	20010620
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
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US 6596925	B1	20030722	US 2000-598401	20000620
CA 2412942	AA	20011227	CA 2001-2412942	20010620
EP 1294870	A1	20030326	EP 2001-945841	20010620
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BR 2001011856	A	20030513	BR 2001-11856	20010620
JP 2004511216	T2	20040415	JP 2002-504633	20010620
NZ 523633	A	20040730	NZ 2001-523633	20010620
US 2003101478	A1	20030529	US 2002-137036	20020430
US 2005244968	A1	20051103	US 2004-927641	20040827
PRAI US 2000-598401	A	20000620		
US 2000-724624	A	20001128		
US 1999-276599	A2	19990325		
US 1999-146591P	P	19990730		
WO 2000-NZ18	W	20000224		
WO 2001-NZ115	W	20010620		
US 2002-137036	A2	20020430		
WO 2003-NZ76	A	20030430		

AB Novel isolated plant polynucleotide promoter sequences from Pinus radiata and ***Eucalyptus*** ***grandis*** are provided, together with genetic constructs comprising such polynucleotides. Methods for using such constructs in modulating the transcription of DNA sequences of interest are also disclosed, together with transgenic plants comprising such constructs. The regulatory DNA regions include constitutive promoters (i.e., from the Super ubiquitin gene), tissue-specific promoters (i.e., specific for leaf, root, flower, pollen, bud, and meristem expression), and temporally regulated promoters (i.e., for xylogenesis).
RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2001:51679 CAPLUS <<LOGINID::20061117>>
DN 135:267911
TI Mapping candidate genes in eucalyptus with emphasis on lignification genes
AU Gion, Jean-Marc; Rech, Philippe; Grima-Pettenati, Jacqueline; Verhaegen, Daniel; Plomion, Christophe
CS CIRAD-Foret, Programme Arbres et Plantations, Montpellier, 34032, Fr.
SO Molecular Breeding (2000), 6(5), 441-449
CODEN: MOBRFL; ISSN: 1380-3743
PB Kluwer Academic Publishers
DT Journal
LA English
AB We used the single-strand conformation polymorphism (SSCP) technique to map eight genes on Eucalyptus urophylla and ***Eucalyptus*** ***grandis*** linkage maps. These included four genes involved in the common phenylpropanoid pathway (caffeic acid 3-O-methyltransferase, caffeoyl CoA 3-O-methyltransferase, 4-coumarate CoA ligase and phenylalanine ammonia-lyase), two genes involved in the "lignin specific" pathway (cinnamoyl CoA reductase and cinnamyl alc. dehydrogenase), and two symbiosis regulated genes (EgHypar and EgTubAl). A novel source of variation which affects the SSCP pattern, i.e. the presence or absence of electrophoresis buffer upon loading the samples into the polyacrylamide gel, was found. The placement of these genes on the Eucalyptus maps was carried out using an interspecific hybrid mapping population. This will further facilitate the identification or exclusion of "positional" candidate genes for characterizing quant. trait loci (QTL) for wood quality and vegetative propagation related traits.
RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s caffeic acid O methyltransferase or cOMT
L3 5371 CAFFEIC ACID O METHYLTRANSFERASE OR COMT

=> s l3 and promoter
L4 204 L3 AND PROMOTER

=> s l4 and pY<=2000
L5 59 L4 AND PY<=2000

=> dup rem l5
PROCESSING COMPLETED FOR L5
L6 32 DUP REM L5 (27 DUPLICATES REMOVED)

=> d bib abs 1-
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L6 ANSWER 1 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:1175748 CAPLUS <<LOGINID::20061117>>
DN 143:433723
TI ***Promoter*** sequences, compositions and methods for modification of gene expression in transgenic organisms
IN Perera, Ranjan; Rice, Stephen; Eagleton, Clare; Wood, Marion; Visser, Elizabeth
PA Arborgen LLC, N. Z.
SO U.S. Pat. Appl. Publ., 122 pp., Cont.-in-part of U.S. Ser. No. 137,036.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 8

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2005244968	A1	20051103	US 2004-927641	20040827
US 6380459	B1	20020430	US 1999-276599	19990325
WO 2000058474	A1	20001005	WO 2000-NZ18	20000224 <--
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WO 2001098485	A1	20011227	WO 2001-NZ115	20010620
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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
ZA 2001007442	A	20020312	ZA 2001-7442	20010910
US 2003101478	A1	20030529	US 2002-137036	20020430
WO 2003093475	A1	20031113	WO 2003-NZ76	20030430
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRAI US 1999-276599	A2	19990325		
US 1999-146591P	P	19990730		
WO 2000-NZ18	A	20000224		
US 2000-598401	A2	20000620		
US 2000-724624	B2	20001128		
WO 2001-NZ115	A	20010620		
US 2002-137036	A2	20020430		
WO 2003-NZ76	A	20030430		

AB Novel isolated plant polynucleotide ***promoter*** sequences are provided, together with genetic constructs comprising such polynucleotides. Methods for using such constructs in modulating the transcription of DNA sequences of interest are also disclosed, together with transgenic plants comprising such constructs. The examples describe the isolation and characterization of promoters from Pinus radiata and Eucalyptus grandis genes. Included are root, flower, xylem, meristem, bud, pollen and leaf-specific ***promoter*** sequences, and promoters from genes encoding homologs of various known proteins. One of the identified sequences was a ***promoter*** from a putative super ubiquitin gene from P. radiata.

L6 ANSWER 2 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:98977 CAPLUS <<LOGINID::20061117>>
DN 142:192341
TI Eucalyptus grandis ***caffeic*** ***acid*** ***O*** - ***methyltransferase*** gene ***promoter*** and methods for the modification of gene expression in vascular tissue
IN Perera, Ranjan; Rice, Stephen James; Eagleton, Clare Katherine
PA Genesis Research and Development Corporation Limited, N. Z.; Rubicon Forests Holdings Limited
SO U.S. Pat. Appl. Publ., 82 pp., Cont.-in-part of U.S. Ser. No. 291,447.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 8

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2005026162	A1	20050203	US 2003-702319	20031106
US 6380459	B1	20020430	US 1999-276599	19990325
WO 2000058474	A1	20001005	WO 2000-NZ18	20000224 <--
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6596925	B1	20030722	US 2000-598401	20000620
ZA 2001007442	A	20020312	ZA 2001-7442	20010910
US 2003101478	A1	20030529	US 2002-137036	20020430
US 2003091981	A1	20030515	US 2002-291447	20021108
PRAI US 1999-276599	A2	19990325		
US 1999-146591P	P	19990730		
WO 2000-NZ18	A2	20000224		
US 2000-598401	A2	20000620		
US 2000-724624	B2	20001128		
US 2001-345397P	P	20011109		
US 2002-137036	A2	20020430		
US 2002-291447	A2	20021108		
US 2002-425087P	P	20021108		
WO 2001-NZ115	W	20010620		

AB The invention claims vascular tissue-specific plant polynucleotide ***promoter*** sequences and genetic constructs comprising such polynucleotides. Specifically, the invention claims sequences for Eucalyptus grandis ***cOMT*** (***caffeic*** ***acid*** ***O*** - ***methyltransferase***) gene ***promoter*** , which is involved in lignin biosynthesis. The invention further claims methods for using such constructs in modulating the transcription of DNA sequences of interest, together with transgenic plants comprising such constructs. Eucalyptus gene ***cOMT*** ***promoter*** activity was demonstrated in transfected Zinnia elegans mesophyll cells using the GUS reporter gene. Vascular tissue-specific expression of the ***promoter*** was shown in transgenic Nicotiana benthamiana using an OMT ***promoter*** -GUS construct.

L6 ANSWER 3 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:414146 CAPLUS <<LOGINID::20061117>>
DN 139:2111
TI Regulated promoters of timber trees and their use in the expression of foreign genes in the manipulation of timber properties
IN Perera, Ranjan; Rice, Stephen; Wood, Marion; Eagleton, Clare; Visser, Elizabeth
PA Genesis Research and Development Corporation Limited, N. Z.
SO U.S. Pat. Appl. Publ., 122 pp., Cont.-in-part of U.S. Ser. No. 724,624
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 8

PATENT NO. KIND DATE APPLICATION NO. DATE

PI US 2003101478 A1 20030529 US 2002-137036 20020430
US 6380459 B1 20020430 US 1999-276599 19990325
WO 2000058474 A1 20001005 WO 2000-NZ18 20000224 <--
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
US 6596925 B1 20030722 US 2000-598401 20000620
WO 2001098485 A1 20011227 WO 2001-NZ115 20010620
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
ZA 2001007442 A 20020312 ZA 2001-7442 20010910
WO 2003093475 A1 20031113 WO 2003-NZ76 20030430
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
AU 2003222535 A1 20031117 AU 2003-222535 20030430
BR 2003009870 A 20050426 BR 2003-9870 20030430
US 2005026162 A1 20050203 US 2003-702319 20031106
US 2005244968 A1 20051103 US 2004-927641 20040827
PRAI US 1999-276599 A2 19990325
US 1999-146591P P 19990730
WO 2000-NZ18 W 20000224
US 2000-598401 A2 20000620
US 2000-724624 A2 20001128
WO 2001-NZ115 W 20010620
US 2001-345397P P 20011109
US 2002-137036 A 20020430
US 2002-291447 A2 20021108
US 2002-425087P P 20021108
WO 2003-NZ76 W 20030430

AB ***Promoter*** regions from a no. of regulated genes of Pinus radiata and Eucalyptus grandis are identified for use in the regulation of foreign gene expression in timber trees. The regulatory DNA regions include constitutive promoters (i.e., from the Super ubiquitin gene), tissue-specific promoters (i.e., specific for leaf, root, flower, pollen, bud, and meristem expression), and temporally regulated promoters (i.e., for xylogenesis). Methods for using such constructs in modulating the transcription of DNA sequences of interest are also disclosed, together with transgenic plants comprising such constructs.

L6 ANSWER 4 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2000:688378 CAPLUS <<LOGINID::20061117>>
DN 133:262315
TI Inducible plant ***caffeic*** ***acid*** ***O*** - ***methyltransferase*** II gene ***promoter*** and chimeric genes for expression in plants
IN Fritig, Bernard; Toquin, Valerie; Geoffroy, Pierrette; Legrand, Michel; Kauffmann, Serge
PA Rhobio, Fr.
SO PCT Int. Appl., 76 pp.
CODEN: PIXXD2
DT Patent
LA French
FAN.CNT 1
PATENT NO. KIND DATE APPLICATION NO. DATE

PI WO 2000056897 A1 20000928 WO 2000-FR714 20000322 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
FR 2791359 A1 20000929 FR 1999-3700 19990322 <--
FR 2791360 A1 20000929 FR 1999-7646 19990611 <--
FR 2791360 B1 20031010
CA 2366217 AA 20000928 CA 2000-2366217 20000322 <--
EP 1163348 A1 20011219 EP 2000-912723 20000322
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
US 2004029167 A1 20040212 US 2003-633840 20030804
PRAI FR 1999-3700 A 19990322
FR 1999-7646 A 19990611
WO 2000-FR714 W 20000322
US 2001-937204 A3 20011213

AB The invention concerns the ***promoter*** of the ***caffeic*** ***acid*** ***O*** - ***methyltransferase*** II (COMTII) gene., which is induced in response to a mech. or chem. injury, to infection by pathogenic agents, in particular bacterial, fungal, viral, or to infestation by an insect or a nematode. The invention also concerns a chimeric gene comprising the ***promoter*** controlling the expression of a heterologous coding sequence and transgenic plants comprising said chimeric gene. Thus, the tobacco COMTII gene ***promoter*** was cloned and used to control expression of Phytophthora megaspermine cDNA in tobacco plants. The transgenic plants displayed increased resistance to tobacco mosaic virus, alfalfa mosaic virus, Phytophthora parasitica nicotianae, and to Erwinia carotovora. The chimeric gene was induced by a variety of agents, e.g., salicylic acid, Me 2,6-dichloroisonicotinate, glucans, chitin fragments, pectins, Me jasmonate, benzothiazole, UV light, and tobacco mosaic virus.
RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 5 OF 32 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
DUPLICATE 1
AN 2000:452023 BIOSIS <<LOGINID::20061117>>
DN PREV200000452023
TI Lignification in transgenic poplars with extremely reduced ***caffeic*** ***acid*** ***O*** - ***methyltransferase*** activity.
AU Jouanin, Lise [Reprint author]; Goujon, Thomas; de Nadai, Veronique; Martin, Marie-Therese; Mila, Isabelle; Vallet, Christelle; Pollet, Brigitte; Yoshinaga, Arata; Chabbert, Brigitte; Petit-Conil, Michel; Lapierre, Catherine
CS Biologie Cellulaire, Institut National de la Recherche Agronomique, 78026, Versailles Cedex, France
SO Plant Physiology (Rockville), (***August, 2000***) Vol. 123, No. 4, pp. 1363-1373. print.
CODEN: PLPHAY. ISSN: 0032-0889.
DT Article
LA English
ED Entered STN: 25 Oct 2000
Last Updated on STN: 10 Jan 2002

AB Transgenic poplars (Populus tremula X Populus alba) were obtained by introduction of a sense homologous transgene encoding ***caffeic*** ***acid*** ***O*** - ***methyltransferase*** (***COMT***) under the control either of the cauliflower mosaic virus double 35S ***promoter*** or of the eucalyptus cinnamyl alcohol dehydrogenase ***promoter*** . Although these constructs conferred a moderate overexpression of ***COMT*** in some lines, a transgenic line with the double 35S ***promoter*** was found where ***COMT*** activity in woody tissues was close to zero due to a gene-silencing phenomenon. For the first time in ***COMT*** down-regulated trees, this alteration substantially reduced lignin level in 6-month-old trees (17% decrease). Lignin structure was found to be strongly altered, with a two times higher content in condensed bonds, an almost complete lack of syringyl units, and the incorporation of 5-hydroxyguaiacyl units to the most remarkable extent reported so far. Consistent with the higher cellulose content and with the higher condensation degree of the lignin, the impact of the transformation on the kraft-pulping performances of the poplar trees positively affected the pulp yield (10% relative increase), but made lignins less amenable to industrial degradations.

L6 ANSWER 6 OF 32 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 2000:360314 BIOSIS <<LOGINID::20061117>>
DN PREV200000360314
TI Secondary xylem-specific expression of caffeoyl-coenzyme A 3-O-methyltransferase plays an important role in the methylation pathway associated with lignin biosynthesis in loblolly pine.
AU Li, Laigeng; Osakabe, Yuriko; Joshi, Chandrashekhar P. [Reprint author]; Chiang, Vincent L.
CS Plant Biotechnology Research Center, School of Forestry and Wood Products, Michigan Technological University, Houghton, MI, 49931, USA
SO Plant Molecular Biology, (***July, 2000***) Vol. 40, No. 4, pp. 555-565. print.
CODEN: PMBIDB. ISSN: 0167-4412.
DT Article
LA English
OS Genbank-AF036095; EMBL-AF036095; DDBJ-AF036095; Genbank-AF098159; EMBL-AF098159; DDBJ-AF098159
ED Entered STN: 23 Aug 2000
Last Updated on STN: 8 Jan 2002

AB Two types of structurally distinct O-methyltransferases mediate the methylation of hydroxylated monomeric lignin precursors in angiosperms. Caffeate 3-O-methyltransferase (***COMT*** ; EC 2.1.1.68) methylates the free acids and caffeoyl CoA 3-O-methyltransferase (CCoAOMT; EC 2.1.1.104) methylates coenzyme A esters. Recently, we reported a novel hydroxycinnamic acid/hydroxycinnamoyl CoA ester O-methyltransferase (AEOMT) from loblolly pine differentiating xylem that was capable of

methylating both acid and ester precursors with similar efficiency. In order to determine the possible existence and role of CCoAOMT in lignin biosynthesis in gymnosperms, a 1.3 kb CCoAOMT cDNA was isolated from loblolly pine that showed 79-82% amino acid sequence identity with many angiosperm CCoAOMTs. The recombinant CCoAOMT expressed in Escherichia coli exhibited a significant methylating activity with hydroxycinnamoyl CoA esters whereas activity with hydroxycinnamic acids was insignificant. Moreover, 3.2 times higher catalytic efficiency for methylating caffeoyl CoA over 5-hydroxyferuloyl CoA was observed which could serve as a driving force towards synthesis of guaiacyl lignin. The secondary xylem-specific expression of CCoAOMT was demonstrated using RNA blot analysis, western blot analysis, and O-methyltransferase enzyme assays. In addition, Southern blot analysis indicated that CCoAOMT may exist as a single-copy gene in loblolly pine genome. The transgenic tobacco plants carrying loblolly pine CCoAOMT ***promoter*** -GUS fusion localized the site of GUS activity at the secondary xylem tissues. These data suggest that CCoAOMT, in addition to AEOMT, plays an important role in the methylation pathway associated with lignin biosynthesis in loblolly pine.

L6 ANSWER 7 OF 32 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN DUPLICATE 2
AN 2000059849 EMBASE <<LOGINID::20061117>>
TI Association between tridimensional personality questionnaire (TPQ) traits and three functional polymorphisms: Dopamine receptor D4 (DRD4), serotonin transporter ***promoter*** region (5-HTTLPR) and catechol O-methyltransferase (***COMT***).
AU Benjamin J.; Osher Y.; Kotler M.; Gritsenko I.; Nemanov L.; Belmaker R.H.; Ebstein R.P.
CS Prof. R.P. Ebstein, Research Laboratory, S Herzog Memorial Hospital, PO Box 35300, Jerusalem 91351, Israel. ebstein@netmedia.net.il
SO Molecular Psychiatry, (2000) Vol. 5, No. 1, pp. 96-100. .
Refs: 22
ISSN: 1359-4184 CODEN: MOPSFQ
CY United Kingdom
DT Journal; Article
FS 022 Human Genetics
032 Psychiatry
LA English
SL English
ED Entered STN: 24 Feb 2000
Last Updated on STN: 24 Feb 2000
AB Dopamine D4 receptor (DRD4), serotonin transporter ***promoter*** regulatory region (5-HTTLPR) and catechol O-methyltransferase (***COMT***) polymorphisms were examined for association with TPQ personality factors in 455 subjects. Significant interactions were observed by multivariate analysis, (***COMT*** x 5-HTTLPR: Hotelling's Trace = 2.3, P = 0.02) and by subsequent univariate 3-way ANOVA when Novelty Seeking (NS) was the dependent variable: 5-HTTLPR x D4DR (F = 6.18, P = 0.03) and ***COMT*** x 5-HTTLPR (F = 4.42, P = 0.03). In the absence of the short 5-HTTLPR allele and in the presence of the high enzyme activity ***COMT*** val/val genotype, NS scores are higher in the presence of the DRD4 seven-repeat allele. The effect of these three polymorphisms on NS was also examined using a within-families design. Siblings who shared identical genotype groups for all three polymorphisms (***COMT*** , DRD4 and 5-HTTLPR) had significantly correlated NS scores (intraclass coefficient = 0.39, F= 2.26, P = 0.008, n = 49) whereas sibs with dissimilar genotypes in at least one polymorphism showed no significant correlation for NS scores (intraclass coefficient = 0.177, F = 1.43, P = 0.09, n =110). Similar interactions were also observed between these three polymorphisms and Novelty Seeking when the 150 independently recruited and non-related subjects were analyzed. The current results are consistent with two earlier reports in which we demonstrated an interaction between the 5-HTTLPR and DRD4 polymorphisms in 2-week-old neonates, in the same children assessed again at 2 months of age and in adults.

L6 ANSWER 8 OF 32 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN DUPLICATE 3
AN 2001056772 EMBASE <<LOGINID::20061117>>
TI An association study between 5-HTTLPR polymorphism, ***COMT*** polymorphism, and Tourette's syndrome.
AU Cavallini M.C.; Di Bella D.; Catalano M.; Bellodi L.
CS M.C. Cavallini, Istituto Scientifico H San Raffaele, Department of Neuroscience, University of Milan Medical School, Via L. Prinetti, 29, 20127 Milan, Italy. cavallini.cristina@hsr.it
SO Psychiatry Research, (27 Dec 2000) Vol. 97, No. 2-3, pp. 93-100. .
Refs: 44
ISSN: 0165-1781 CODEN: PSRSDR
PUI S 0165-1781(00)00220-1
CY Ireland
DT Journal; Article
FS 008 Neurology and Neurosurgery
032 Psychiatry
LA English
SL English
ED Entered STN: 16 Mar 2001
Last Updated on STN: 16 Mar 2001
AB Several lines of evidence suggest that a genetic component underlies Tourette's syndrome (TS). We investigated both the role of the insertion/deletion polymorphism in the ***promoter*** region of the serotonin transporter gene (5-HTTLPR) and that of the Val-158-Met substitution in the catechol-O-methyl-transferase (***COMT***) gene in conferring susceptibility to TS. Fifty-two TS patients were recruited and compared with a control group of 63 healthy subjects. Neither a genotypic nor an allelic association was found; subdividing TS patients according to clinical variables, such as a co-diagnosis of obsessive-compulsive disorder (OCD) and a positive family history for obsessive compulsive disorder or tics, also failed to reveal a significant association. The lack of significance for 5-HTTLPR and ***COMT*** polymorphisms in conferring liability to TS does not exclude a role of different functional polymorphisms in genes coding for serotonergic or dopaminergic structures in the etiology of TS. In fact, TS is a complex disorder and these genes most likely have only a minor genetic effect in its etiology. .COPYRGT. 2000 Elsevier Science Ireland Ltd.

L6 ANSWER 9 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2000:142376 CAPLUS <<LOGINID::20061117>>
DN 133:162613
TI Analysis of catechol-O-methyltransferase and 5-hydroxytryptamine transporter polymorphisms in patients at risk for suicide
AU Russ, M. J.; Lachman, H. M.; Kashdan, T.; Saito, T.; Bajmakovic-Kacila, S.
CS Hillside Hospital/North Shore-Long Island Jewish Health System, Glen Oaks, NY, USA
SO Psychiatry Research (***2000***), 93(1), 73-78
CODEN: PSRSDR; ISSN: 0165-1781
PB Elsevier Science Ireland Ltd.
DT Journal
LA English
AB Genotype frequencies of functional polymorphisms in the genes encoding the serotonin transporter (5-HTT) and the enzyme catechol-O-methyltransferase (***COMT***) were not different in 51 suicidal inpatients compared to 51 control subjects. Within the patient group, increased hopelessness and suicide ideation were assocd. with homozygosity of the 5-HTT high ***promoter*** activity allele.
RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 10 OF 32 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN DUPLICATE 4
AN 2000017622 EMBASE <<LOGINID::20061117>>
TI An interaction between the catechol O-methyltransferase and serotonin transporter ***promoter*** region polymorphisms contributes to tridimensional personality questionnaire persistence scores in normal subjects.
AU Benjamin J.; Osher Y.; Lichtenberg P.; Bachner-Melman R.; Gritsenko I.; Kotler M.; Belmaker R.H.; Valsky V.; Drendel M.; Ebstein R.P.
CS Prof. R.P. Ebstein, Research Laboratory, S. Herzog Memorial Hospital, PO Box 35300, Jerusalem 91351, Israel. ebstein@netmedia.net.il
SO Neuropsychobiology, (2000) Vol. 41, No. 1, pp. 48-53. .
Refs: 46
ISSN: 0302-282X CODEN: NPBYAL
CY Switzerland
DT Journal; Conference Article
FS 022 Human Genetics
032 Psychiatry
LA English
SL English
ED Entered STN: 20 Jan 2000
Last Updated on STN: 20 Jan 2000
AB Persistence (RD2) is a subscale of the reward dependence trait, one of the three major personality factors assessed by the Tridimensional Personality Questionnaire (TPQ). Subjects with high RD2 scores are characterized as industrious, hard-working, ambitious, perfectionistic. TPQ scores were examined in 577 normal subjects inventoried for two common genetic polymorphisms, the catechol O-methyltransferase (***COMT***) valine to methionine (val to met) amino acid substitution that determines high and low enzyme activity, and the serotonin transporter ***promoter*** region 44 bp deletion (5-HTTLPR) linked in some studies to harm avoidance or neuroticism. When TPQ RD2 scores are grouped by ***COMT*** and 5-HTTLPR polymorphisms and analyzed by two-way ANOVA, significant main effects for ***COMT*** (F = 2.98, p = 0.05) and 5-HTTLPR (F = 4.27, p = 0.04) and a significant interaction ***COMT*** x 5-HTTLPR (F = 6.18, p = 0.002) are observed. In the presence of ***COMT*** homozygosity (val/val or met/met genotypes), the presence of the short 5-HTTLPR allele raises RD2 scores. The effect of these two polymorphisms on RD2 was also examined using a within-families design. Siblings in our data set who shared identical genotypes had significantly correlated RD2 scores (intraclass coefficient = 0.34, F = 2.03, p = 0.002, n = 67), whereas sibs with dissimilar genotypes in at least one polymorphism showed no significant correlation for RD2 scores (intraclass coefficient = 0.105, F = 1.23, p = 0.16, n = 92).

L6 ANSWER 11 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1999:166731 CAPLUS <<LOGINID::20061117>>
DN 130:220521
TI cDNAs for enzymes of lignin biosynthesis of corn and their use in modulating plant lignin content
IN Helentjaris, Timothy G.; Bowen, Benjamin A.; Wang, Xun
PA Pioneer Hi-Bred International, Inc., USA
SO PCT Int. Appl., 166 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE

PI WO 9910498 A2 19990304 WO 1998-US17519 19980824 <--
WO 9910498 A3 19990902
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
CA 2301500 AA 19990304 CA 1998-2301500 19980824 <--
AU 9891175 A1 19990316 AU 1998-91175 19980824 <--
EP 1007690 A2 20000614 EP 1998-943355 19980824 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI
HU 200002477 A2 20001028 HU 2000-2477 19980824 <--
TR 200000547 T2 20010521 TR 2000-200000547 19980824
BR 9815588 A 20020122 BR 1998-15588 19980824
MX 200002071 A 20001020 MX 2000-2071 20000228 <--
US 2003163839 A1 20030828 US 2003-361460 20030210
PRAI US 1997-57082P P 19970827
US 1998-76851 A2 19980512
WO 1998-US17519 W 19980824

AB CDNAs for enzymes of lignin biosynthesis of corn are cloned and characterized for use in altering plant lignin compn. The cDNAs were found in libraries prepd. from a no. of developmental, tissue, growth and disease stages of corn. The invention provides isolated nucleic acids and their encoded proteins which are involved in lignin biosynthesis. The invention further provides recombinant expression cassettes, host cells, transgenic plants, and antibody compns.

L6 ANSWER 12 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1999:439367 CAPLUS <<LOGINID::20061117>>
DN 131:54749
TI Genetic transformation and regeneration of plants
IN Chiang, Vincent Lee C.; Tsai, Chung Jui; Podila, Gopi K.
PA Board of Control of Michigan Technological University, USA
SO U.S., 10 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE

PI US 5922928 A 19990713 US 1996-757576 19961127 <--
PRAI US 1995-7727P P 19951130

AB An Agrobacterium-mediated transformation and regeneration method for plants is provided, including a transformation method to produce transgenic plants with an altered lignin compn. The method is utilized for Agrobacterium-mediated transformation of chimeric neomycin phosphotransferase II and .beta.-glucuronidase genes to greeenhouse-grown quaking aspen. The binary vector BinSynGus contg. double 35S ***promoter*** /alfalfa mosaic virus RNA4-untranslated region/GUS/NOS gene fusion with the NOS/NPT II/NOS gene cassette was mobilized into Agrobacterium tumefaciens strain C58 by freeze-thaw method. Constructs encoding aspen or eucalyptus caffeic acid/5-hydroxyferulic acid O-methyltransferase (OMT) in antisense or sense orientation were also generated for introduction into aspen or sweetgum (Liquidambar styraciflua), resulting in altered guaiacyl lignin content pulping efficiency..
RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 13 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1999:205373 CAPLUS <<LOGINID::20061117>>
DN 130:247849
TI Genetic engineering of wood color in plants by incorporation of the lignin pathway gene O-methyltransferase
IN Chiang, Vincent Lee C.; Tsai, Chung Jui; Podila, Gopi K.
PA Board of Control of Michigan Technological University, USA
SO U.S., 9 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE

PI US 5886243 A 19990323 US 1996-715325 19960918 <--
PRAI US 1996-715325 19960918

AB The invention relates to genetically engineering the wood color of woody plants by incorporation of the lignin pathway gene O-methyltransferase into the genome of the plants. The invention utilizes a cDNA clone of the O-methyltransferase (OMT) gene, however genomic DNA can also be utilized. The structure of lignin of the plant is altered and the color of the wood is altered to reddish-brown. The ability to alter the color of wood would be of great value to the furniture and paper industry.
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 14 OF 32 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN DUPLICATE 5
AN 1999426795 EMBASE <<LOGINID::20061117>>
TI Homicidal behavior in schizophrenia associated with a genetic polymorphism determining low catechol O-methyltransferase (***COMT***) activity.
AU Kotler M.; Barak P.; Cohen H.; Averbuch I.E.; Grinshpoon A.; Gritsenko I.; Nemanov L.; Ebstein R.P.
CS Dr. R.P. Ebstein, Research Laboratory, S. Herzog Memorial Hospital, PO Box 35300, Jerusalem 91351, Israel. ebstein@netmedia.net.il
SO American Journal of Medical Genetics - Neuropsychiatric Genetics, (15 Dec 1999) Vol. 88, No. 6, pp. 628-633. .
Refs: 59
ISSN: 0148-7299 CODEN: AJMGEB
CY United States
DT Journal; Article
FS 022 Human Genetics
029 Clinical Biochemistry
032 Psychiatry
LA English
SL English
ED Entered STN: 29 Dec 1999
Last Updated on STN: 29 Dec 1999

AB Although aggressive, violent, and dangerous behavior in man has multifactorial causes, genetic factors are estimated by twin and adoption studies to substantially contribute to the development of such conduct. Recently, homozygosity of a low enzyme activity variant of the catechol O-methyltransferase (***COMT***) gene was reported to be associated with aggressive behavior in a group of schizophrenic patients. We observe a similar tendency in a group of 30 schizophrenic patients who were confined to a maximum- security psychiatric facility for homicide. Significant excess (46.7% versus 21.0%) homozygosity of the low activity COMTmet/met genotype was observed in 30 mostly male (28 of 30) homicidal schizophrenic patients compared with 415 control subjects (Pearson AHp2 = 10.53, P = 0.005, df = 2). No difference in ***COMT*** genotype was found between 62 nonviolent schizophrenic patients and the 415 control subjects (AHp2 = 0.963, P > 0.1, df = 2). A trend for excess (46.7% versus 25.8%) homozygosity of the low activity COMTmet/met genotype was also observed when the homicidal schizophrenic subjects were compared directly with the nonviolent schizophrenic patients (AHp2 = 4.03, P = 0.1, df = 2). Similarly, an excess of the low activity COMTmet allele was observed in homicidal versus nonviolent schizophrenic patients (AHp2 = 2.92, P = 0.087, df = 2). Similar results were obtained if only male subjects were examined. No significant difference was found between control (257 Ashkenazi and 152 non-Ashkenazi Jews) ***COMT*** genotypes in the two principal ethnic groups examined (AHp2 = 3.79, P > 0.1, df = 2). Finally, no association was observed between homicidal behavior in schizophrenic patients and the dopamine D4 exon III repeat length polymorphism (D4DR) and the serotonin transporter ***promoter*** - region polymorphism (5-HTTLPR).

L6 ANSWER 15 OF 32 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
STN DUPLICATE 6
AN 1999:455251 BIOSIS <<LOGINID::20061117>>
DN PREV199900455251
TI Secondary xylem-specific expression of caffeoyl-coenzyme A 3-O-methyltransferase plays an important role in the methylation pathway associated with lignin biosynthesis in loblolly pine.
AU Li, Laigeng; Osakabe, Yuriko; Joshi, Chandrashekhar P. [Reprint author]; Chiang, Vincent L.
CS Plant Biotechnology Research Center, School of Forestry and Wood Products, Michigan Technological University, Houghton, MI, 49931, USA
SO Plant Molecular Biology, (***July, 1999***) Vol. 40, No. 4, pp. 555-565. print.
CODEN: PMBIDB. ISSN: 0167-4412.
DT Article
LA English
OS Genbank-AF098159; EMBL-AF098159; DDBJ-AF098159; Genbank-AF036095; EMBL-AF036095; DDBJ-AF036095
ED Entered STN: 1 Nov 1999
Last Updated on STN: 3 May 2000

AB Two types of structurally distinct O-methyltransferases mediate the methylation of hydroxylated monomeric lignin precursors in angiosperms. Caffeate 3-O-methyltransferase (***COMT*** ; EC 2.1.1.68) methylates the free acids and caffeoyl CoA 3-O-methyltransferase (CCoAOMT; EC 2.1.1.104) methylates coenzyme A esters. Recently, we reported a novel hydroxycinnamic acid/hydroxycinnamoyl CoA ester O-methyltransferase (AEOMT) from loblolly pine differentiating xylem that was capable of methylating both acid and ester precursors with similar efficiency. In order to determine the possible existence and role of CCoAOMT in lignin biosynthesis in gymnosperms, a 1.3 kb CCoAOMT cDNA was isolated from loblolly pine that showed 79-82% amino acid sequence identity with many angiosperm CCoAOMTs. The recombinant CCoAOMT expressed in Escherichia coli exhibited a significant methylating activity with hydroxycinnamoyl CoA esters whereas activity with hydroxycinnamic acids was insignificant. Moreover, 3.2 times higher catalytic efficiency for methylating caffeoyl CoA over 5-hydroxyferuloyl CoA was observed which could serve as a driving force towards synthesis of guaiacyl lignin. The secondary xylem-specific expression of CCoAOMT was demonstrated using RNA blot analysis, western blot analysis, and O-methyltransferase enzyme assays. In addition, Southern blot analysis indicated that CCoAOMT may exist as a single-copy

gene in loblolly pine genome. The transgenic tobacco plants carrying loblolly pine CCoAOMT ***promoter*** -GUS fusion localized the site of GUS activity at the secondary xylem tissues. These data suggest that CCoAOMT, in addition to AEOMT, plays an important role in the methylation pathway associated with lignin biosynthesis in loblolly pine.

L6 ANSWER 16 OF 32 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN DUPLICATE 7
AN 1999326996 EMBASE <<LOGINID::20061117>>
TI Association of unipolar major depressive disorder with genes of the serotonergic and dopaminergic pathways.
AU Frisch A.; Postilnick D.; Rockah R.; Michaelovsky E.; Postilnick S.; Birman E.; Laor N.; Rauchverger B.; Kreinin A.; Poyurovsky M.; Schneidman M.; Modai I.; Weizman R.
CS Dr. A. Frisch, Laboratory of Biochemical Genetics, Felsenstein Medical Research Center, Rabin Medical Center, Petah Tikva 49100, Israel. frischa@shani.net
SO Molecular Psychiatry, (1999) Vol. 4, No. 4, pp. 389-392. .
Refs: 25
ISSN: 1359-4184 CODEN: MOPSFQ
CY United Kingdom
DT Journal; Article
FS 022 Human Genetics
032 Psychiatry
LA English
SL English
ED Entered STN: 7 Oct 1999
Last Updated on STN: 7 Oct 1999
AB Major depressive disorder (MDD) is a severe psychiatric disorder with a lifetime prevalence of about 15%. The importance of the genetic component is well accepted, but the mode of inheritance is complex and non-Mendelian. A line of evidence suggests the involvement of serotonin and dopamine neurotransmitters in the pathophysiology of depression. In the present study, 102 unipolar MDD patients and 172 healthy controls were genotyped for polymorphisms in four serotonergic and three dopaminergic candidate genes [tryptophan hydroxylase (TPH), serotonin receptor 2A (HTR2A), serotonin receptor 2C (HTR2C), serotonin transporter ***promoter*** region (5-HTTLPR), dopamine receptor D4 (DRD4), dopamine transporter (DAT1) and catechol-O-methyl transferase (***COMT***)]. There were no statistical differences between MDD patients and healthy controls in the genotypic and allelic distribution of all polymorphisms investigated. Thus, our study does not support a major role for these polymorphisms in contributing to susceptibility to MDD, although it does not preclude minor effects.

L6 ANSWER 17 OF 32 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 1999:396468 BIOSIS <<LOGINID::20061117>>
DN PREV199900396468
TI Expression of bifunctional caffeoyl-CoA 3-O-methyltransferase in stress compensation and lignification.
AU Grimmig, B.; Kneusel, R. E.; Junghanns, K. T.; Matern, U. [Reprint author]
CS Institut fuer Pharmazeutische Biologie, Philipps-Universitaet Marburg, Deutschhausstrasse 17 A, D-35032, Marburg, Germany
SO Plant Biology (Stuttgart), (***May, 1999***) Vol. 1, No. 3, pp. 299-310. print.
ISSN: 1435-8603.
DT Article
LA English
ED Entered STN: 8 Oct 1999
Last Updated on STN: 8 Oct 1999
AB Caffeate and caffeoyl-CoA O-methyltransferases (COMTs and CCoAOMTs) catalyze the formation of ferulic acid and feruloyl-CoA, respectively, in many plants, and their physiological significance is under investigation. CCoAOMT was proposed to play a pivotal role in cell wall reinforcement during the induced disease resistance response, as exemplified in elicitor-treated parsley cells, as well as in the formation of guaiacyl- and syringyl-type lignins. This requires selective substrate and tissue specificities. Parsley CCoAOMT expressed in E. coli methylated caffeoyl- or 5-hydroxyferuloyl-CoA to feruloyl- and sinapoyl-CoA, whereas neither caffeate nor 5-hydroxyferulate was accepted. Tissue print hybridizations of parsley stem and root sections revealed, furthermore, that CCoAOMT mRNA is constitutively associated with the vascular tissues, but is also expressed in the surface cell layers upon wounding. In order to study the ***promoter*** activity of the parsley CCoAOMT gene, tobacco plantlets were transformed with parsley CCoAOMT ***promoter*** -GUS reporter gene constructs; these transformants, at the very young stage, expressed GUS activity in a narrow subapical root zone only extending later to the vascular tissue at the onset of xylem differentiation. GUS activity of the mature transgenic tobacco plants was observed exclusively in the parenchyma lining the differentiated xylem elements and xylem ray cells of root, stem or leaf tissues. Thus, parsley CCoAOMT is a bifunctional enzyme which appears to serve in both stress compensation and lignification. This was supported by the ontogenetic activity profile of tobacco endogeneous CCoAOMT, which correlated closely with the GUS expression under the control of parsley CCoAOMT ***promoter*** , while the proportion of CCoAOMT vs. ***COMT*** activities varied substantially during growth of the transgenic tobacco plants.

L6 ANSWER 18 OF 32 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 2003:144035 BIOSIS <<LOGINID::20061117>>
DN PREV200300144035
TI Understanding lignin biosynthesis to improve wood quality in poplar.
AU Chen, Cuiying [Reprint Author]; Meyermans, Hugo [Reprint Author]; Christensen, Jorgen H. [Reprint Author]; Moreel, Kris [Reprint Author]; Baucher, Marie [Reprint Author]; Van, Jan [Reprint Author]; Messens, Eric [Reprint Author]; Van, Marc [Reprint Author]; Boerjan, Wout [Reprint Author]; Lapierre, Catherine; Leple, Jean-Charles; Petit-Conil, Michel
CS Departement Genetica, University of Ghent, VIB, Ghent, Belgium cuche@gengenp.rug.ac.be
SO Plant Biology (Rockville), (***1999***) Vol. 1999, pp. 65. print.
Meeting Info.: Annual Meeting of the American Society of Plant Physiologists. Baltimore, Maryland, USA. July 24-28, 1999. American Society of Plant Physiologists (ASPP).
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 19 Mar 2003
Last Updated on STN: 19 Mar 2003

L6 ANSWER 19 OF 32 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN DUPLICATE 8
AN 1999233429 EMBASE <<LOGINID::20061117>>
TI Characterization and implications of estrogenic down-regulation of human catechol-O-methyltransferase gene transcription.
AU Xie T.; Ho S.-L.; Ramsden D.
CS Dr. S.-L. Ho, University Department of Medicine, University of Hong Kong, Queen Mary Hospital, Hong Kong, Hong Kong. slho@hkucc.hku.hk
SO Molecular Pharmacology, (1999) Vol. 56, No. 1, pp. 31-38. .
Refs: 40
ISSN: 0026-895X CODEN: MOPMA3
CY United States
DT Journal; Article
FS 029 Clinical Biochemistry
LA English
SL English
ED Entered STN: 5 Aug 1999
Last Updated on STN: 5 Aug 1999
AB Catechol-O-methyltransferase (***COMT*** , EC 2.1.1.6) is a ubiquitous enzyme that is crucial to the metabolism of carcinogenic catechols and catecholamines. Regulation of human ***COMT*** gene expression may be important in the pathophysiology of various human disorders including estrogen-induced cancers, Parkinson's disease, depression, and hypertension. The gender difference in human ***COMT*** activity and variations in rat ***COMT*** activity during the estrous cycle led us to explore whether estrogen can regulate human ***COMT*** gene transcription. Our Northern analyses showed that physiological concentrations of 17-.beta.-estradiol (10-9-10-7 M) could decrease human 1.3- kilobase ***COMT*** mRNA levels in MCF-7 cells in a time- and dose-dependent manner through an estrogen receptor-dependent mechanism. Two DNA fragments immediately 5' to the published human ***COMT*** gene proximal and distal promoters were cloned. Sequence analyses revealed several half-palindromic estrogen response elements and CCAAT/enhancer binding protein sites. By cotransfecting ***COMT*** ***promoter*** -chloramphenicol acetyltransferase reporter genes with human estrogen receptor cDNA and pSV-.beta.-galactosidase plasmids into COS-7 cells, we showed that 17-.beta.-estradiol could down-regulate chloramphenicol acetyltransferase activities, and ***COMT*** ***promoter*** activities dose-dependently. Functional deletion analyses of ***COMT*** promoters also showed that this estrogenic effect was mediated by a 280 base pair fragment with two putative half-palindromic estrogen response elements in the proximal ***promoter*** and a 323-base pair fragment with two putative CCAAT/enhancer binding protein sites in the distal ***promoter*** . Our findings provide the first evidence and molecular mechanism for estrogen to inhibit ***COMT*** gene transcription, which may shed new insight into the role of estrogen in the pathophysiology of different human disorders.

L6 ANSWER 20 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1998:527453 CAPLUS <<LOGINID::20061117>>
DN 129:170509
TI Gene-based assay for agents with potential therapeutic efficacy in the treatment of obsessive compulsive disorder and disorders related thereto
IN Karayiorgou, Maria; Gogos, Joseph A.
PA The Rockefeller University, USA
SO PCT Int. Appl., 135 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9832878	A1	19980730	WO 1998-US644	19980128 <--
W: AU, CA, JP, MX				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5863734	A	19990126	US 1997-790374	19970128 <--
AU 9862405	A1	19980818	AU 1998-62405	19980128 <--
PRAI US 1997-790374	A	19970128		
WO 1998-US644	W	19980128		

AB Methods of identifying subjects having a susceptibility to obsessive-compulsive disorder, and disorders related thereto, resulting from a reduced level of catechol-O-methyltransferase (***COMT***), or

modulated levels of monoamine oxidase A are described. In addn., knockout mice expressing decreased levels of ***COMT*** relative to a wild-type mouse are disclosed and characterized herein, along with methods for selecting therapeutic agents for possible use in the treatment of OCD or disorder related thereto.
RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 21 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1998:151788 CAPLUS <<LOGINID::20061117>>
DN 128:279382
TI Genomic sequence and mapping of a methyljasmonate-induced O-methyltransferase from barley (Hordeum vulgare L.)
AU Lee, J. E.; Kleinhofs, A.; Graner, A.; Wegener, S.; Parthier, B.; Lobler, M.
CS Abt. Hormonforsch., Inst. Pflanzenbiochem., Halle, D-06120, Germany
SO DNA Sequence (***1997***), 7(6), 357-363
CODEN: DNSEES; ISSN: 1042-5179
PB Harwood Academic Publishers
DT Journal
LA English
AB We have isolated a genomic clone corresponding to a ***caffeic*** ***acid*** ***O*** - ***methyltransferase*** (***COMT***) from barley (Hordeum vulgare L.) using a cDNA for a previously described jasmonate-regulated mRNA showing homol. to ***COMT*** . Primer extension was used to characterize the 5' end of the mRNA while the 3' end, intron/exon structure and other features of the sequence were deduced by comparison to the cDNA sequence and/or conserved motifs. The gene is mapped to chromosome five and is absent in the barley cultivar Morex. Southern and northern analyses suggest that no differences in genomic structure and jasmonate inducibility exist between the barley cultivar Salome (source of the cDNA clone) and Igri (source of the genomic clone). This genomic clone is thus suitable for ***promoter*** studies with respect to jasmonate induction.
RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 22 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1996:738090 CAPLUS <<LOGINID::20061117>>
DN 126:2517
TI ***Promoter*** of the S-adenosyl-L-homocysteine hydrolase gene (SHH) of Arabidopsis for driving expression of foreign genes in plants
IN Greenland, Andrew James; Draper, John; Warner, Simon; Skipsey, Marc
PA Zeneca Limited, UK
SO PCT Int. Appl., 57 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9632488	A1	19961017	WO 1996-GB882	19960410 <--
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN				
CA 2213697	AA	19961017	CA 1996-2213697	19960410 <--
AU 9652844	A1	19961030	AU 1996-52844	19960410 <--
AU 712133	B2	19991028		
EP 820517	A1	19980128	EP 1996-909288	19960410 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 11503326	T2	19990326	JP 1996-530811	19960410 <--
US 6037524	A	20000314	US 1997-930894	19971009 <--
PRAI GB 1995-7381	A	19950410		
WO 1996-GB882	W	19960410		

AB A ***promoter*** derived from an SHH gene, esp. the SHH gene of Arabidopsis thaliana which is capable of directing expression of a variety of operator genes in both monocotyledonous and dicotyledonous plants is described. The ***promoter*** of the invention may be used for directing expression of pathogen resistance genes to disease or wound sites. The cloning of a cDNA for the asparagus hydrolase is described. This cDNA was used to identify the Arabidopsis gene and the ***promoter*** region identified. Use of reporter genes showed that the ***promoter*** could drive high level constitutive expression of a gene in all tissues. Expression was further induced in response to wounding. The ***promoter*** was used in combination with an omega element to drive expression of the Dm-AMP1 gene of Dahlia merckii in oilseed rape. Transgenic plants were more resistant to infection by Phoma lingam than were control plants.

L6 ANSWER 23 OF 32 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN DUPLICATE 9
AN 96210364 EMBASE <<LOGINID::20061117>>
DN 1996210364
TI Characterization of the rat catechol-O-methyltransferase gene proximal ***promoter*** : Identification of a nuclear protein-DNA interaction that contributes to the tissue-specific regulation.
AU Tenhunen J.
CS Orion Corporation, Orion-Farmos Research Center, Biokeskus 1A,00014 Helsingin yliopisto Helsinki, Finland
SO DNA and Cell Biology, (1996) Vol. 15, No. 6, pp. 461-473. .
ISSN: 1044-5498 CODEN: DCEBE8
CY United States
DT Journal; Article
FS 029 Clinical Biochemistry
LA English
SL English
ED Entered STN: 9 Aug 1996
Last Updated on STN: 9 Aug 1996
AB The methylating enzyme catechol-O-methyltransferase (***COMT***) is an important inactivator of substrates containing catechol-structure, such as catechol neurotransmitters and hormones. In previous studies, the rat ***COMT*** gene has been cloned and characterized, and it has been shown that the two ***COMT*** polypeptides, S- and MB- ***COMT*** , are expressed from one gene by cooperation of two separate promoters. One ***promoter*** , P2, functions constitutively, whereas the other, the proximal P1 ***promoter*** , is regulated in a tissue- specific manner. In this report, a more detailed analysis of the rat P1 ***promoter*** is presented. By using reporter gene constructs, it is shown that upstream sequences of the P1 ***promoter*** contain several regions that modulate the expression either positively or negatively. These experiments also show that the region between the MB- and S-ATG translation initiation codons is indispensable for the activity of this ***promoter*** . Analysis of this region by DNase I footprinting and gel retardation assays identified the presence of several DNA elements with SP1 and NF1 recognition site homologies that bound both liver and brain nuclear proteins. However, one 11-nucleotide-long DNA region containing an overlapping consensus binding sequence for CREB and C/EBP-like factors reacted only with the liver nuclear lysate. Supershift experiments suggest that the transcription factor C/EBP.alpha. mediates the tissue-specific expression of the rat ***COMT*** P1 ***promoter***

L6 ANSWER 24 OF 32 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 10
AN 1996:462557 BIOSIS <<LOGINID::20061117>>
DN PREV199699184913
TI The maize ***caffeic*** ***acid*** ***O*** - ***methyltransferase*** gene ***promoter*** is active in transgenic tobacco and maize plant tissues.
AU Capellades, Montserrat; Torres, Miguel Angel; Bastisch, Ingo; Stiefel, Virginia; Vignols, Florence; Bruce, Wesley B.; Peterson, David; Puigdomenech, Pere; Rigau, Joan [Reprint author]
CS Dep. de Genetica Molecular, CID-CSIC, Jordi Girona 18-26, 08034-Barcelona, Spain
SO Plant Molecular Biology, (***1996***) Vol. 31, No. 2, pp. 307-322.
CODEN: PMBIDB. ISSN: 0167-4412.
DT Article
LA English
ED Entered STN: 11 Oct 1996
Last Updated on STN: 5 Nov 1996
AB The pattern of expression directed by the ***promoter*** of the maize ***caffeic*** ***acid*** ***O*** - ***methyltransferase*** (***COMT***) gene was studied by histochemical and fluorometric beta-glucuronidase (GUS) analysis in transgenic maize and tobacco plants. The ***COMT*** ***promoter*** directs GUS expression to the xylem and the other tissues undergoing lignification, and it responds to wounding and to elicitors. In transgenic maize plants, expression of GUS corresponds to the pattern of expression of the endogenous ***COMT*** gene as determined by northern analysis and in situ hybridization. The pattern in transgenic tobacco plants clearly shows that the maize ***promoter*** sequence is recognized by tobacco transcriptional factors, in spite of the anatomical differences and the evolutionary distance between these two species. The results suggest that the most significant ***promoter*** signals that induce the specific expression of the lignin ***COMT*** are conserved in different species.

L6 ANSWER 25 OF 32 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 1996:508866 BIOSIS <<LOGINID::20061117>>
DN PREV199699231222
TI Analysis of promoters active in specific cell types in the radicular system of Zea mays.
AU Capellades, Montserrat; Torres, Miguel Angel; Uribe, Xavier; Vignols, Florence; Rigau, Joan; Puigdomenech, Pere
CS Molecular Genetic Dep., CID-CSIC, Jordi Girona, 18. 08034 Barcelona, Spain
SO Biotecnologia Aplicada, (***1996***) Vol. 13, No. 2, pp. 126.
ISSN: 0864-4551.
DT Article
LA English
ED Entered STN: 14 Nov 1996
Last Updated on STN: 10 Dec 1996

L6 ANSWER 26 OF 32 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 11
AN 1996:67319 BIOSIS <<LOGINID::20061117>>
DN PREV199698639454
TI A novel lignin in poplar trees with a reduced caffeic acid/5-

hydroxyferulic acid O-methyltransferase activity.
AU Van Doorsselaere, Jan; Baucher, Marie; Chognot, Emmanuelle; Chabbert, Brigitte; Tollier, Marie-Therese; Petit-Conil, Michel; Leple, Jean-Charles; Pilate, Gilles; Cornu, Daniel; Monties, Bernard; Van Montagu, Marc [Reprint author]; Inze, Dirk; Boerjan, Wout; Jouanin, Lise
CS Lab. Genetica, Univ. Gent, K.L. Ledeganckstr. 35, B-9000 Gent, Belgium
SO Plant Journal, (***1995***) Vol. 8, No. 6, pp. 855-864.
ISSN: 0960-7412.
DT Article
LA English
ED Entered STN: 9 Feb 1996
Last Updated on STN: 13 Mar 1996
AB Lignin is a polymeric constituent of the cell wall that needs to be removed during the paper making process. Bispecific caffeic acid/5-hydroxyferulic acid O-methyltransferase (***COMT***) catalyses the O-methylation of caffeic acid and 5-hydroxyferulic acid to ferulic acid and sinapic acid, respectively. These compounds are intermediates in the biosynthesis of the lignin precursors. Therefore, COMTs are potential target enzymes for reducing the amount, or modifying the composition, of lignin in plants. Different antisense and sense constructs have been expressed of a gene encoding a ***COMT*** from poplar (Populus trichocarpa times P. deltoides) in a P. tremula times P. alba clone under the control of the cauliflower mosaic virus 35S ***promoter*** . From all analysed transformants, four lines transformed with an antisense construct had a reduced ***COMT*** activity. Two showed a 50% reduction of ***COMT*** activity, which altered only slightly the monomeric composition. In the two other transformants, the ***COMT*** activity was reduced by 95%. In the latter case, the syringyl/guaiacyl ratio (S/G) was reduced by sixfold (due to a decrease of S and an increase of G), as analysed by thioacidolysis. A new component of lignin, the 5-hydroxyguaiacyl residue, was detected among the thioacidolysis products. Moreover, in contrast to the white/yellow colour of wild-type wood, the xylem of the transgenic lines with a 95% reduction of ***COMT*** activity was pale rose. A similar phenotype was observed in brown-midrib mutants of maize and sorghum, known for their altered lignification. Although the lignin composition was consistently modified, the lignin content of the transgenic poplars was similar to that of the controls.

L6 ANSWER 27 OF 32 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN DUPLICATE 12
AN 94254081 EMBASE <<LOGINID::20061117>>
DN 1994254081
TI Genomic organization of the human catechol O-methyltransferase gene and its expression from two distinct promoters.
AU Tenhunen J.; Salminen M.; Lundstrom K.; Savolainen R.; Ulmanen I.
CS Orion Corporation, Orion-Farmos, Research Center, Valimotie 7,FIN-00380 Helsinki, Finland
SO European Journal of Biochemistry, (1994) Vol. 223, No. 3, pp. 1049-1059. .
ISSN: 0014-2956 CODEN: EJBCAI
CY Germany
DT Journal; Article
FS 029 Clinical Biochemistry
LA English
SL English
ED Entered STN: 14 Sep 1994
Last Updated on STN: 14 Sep 1994
AB Human genomic DNA fragments containing catechol O-methyltransferase (***COMT***) sequences were isolated and the exon-intron structure analysed by sequencing, PCR and comparing to the human ***COMT*** cDNA sequences. The gene contains six exons, of which exons 1 and 2 are noncoding. MB-ATG and S-ATG codons, responsible for the initiation of translation of the membrane-bound (MB) and soluble (S) forms of the enzyme, are located in exon 3. Two distinct ***COMT*** -specific transcripts, 1.3 kb and 1.5 kb, were detected in various human tissues and cell lines. Different quantities of the shorter ***COMT*** -specific mRNA in the tissues studied suggest a tissue-specific regulation of the ***COMT*** gene at transcriptional level. Mapping of the 5' ends of the ***COMT*** mRNAs showed that transcription initiates at multiple sites in two separate DNA regions, which are preceded by functional ***promoter*** sequences. The proximal ***promoter*** (P1), located between the two translation initiation codons and extending approximately 200 bp upstream of the MB-ATG initiation codon, apparently gives rise to the 1.3-kb S- ***COMT*** mRNA (S-mRNA). The distal ***promoter*** (P2) is located in a DNA fragment in front of and partly overlapping the transcription-start region of the 1.5-kb transcript, suggesting that it controls the expression of this MB-mRNA. Similarities between the rat and human ***COMT*** gene promoters are analyzed.

L6 ANSWER 28 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1993:249289 CAPLUS <<LOGINID::20061117>>
DN 118:249289
TI Modification of lignin synthesis in plants
IN Van Doorsselaere, Jan; Fritig, Gernard Jean Meinrad; Inze, Dirk Gustaaf; Jouanin, Lise; Knight, Mary Elizabeth; Van Montagu, Marc; Legrand, Michel
PA Imperial Chemical Industries PLC, UK
SO PCT Int. Appl., 46 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9305160	A1	19930318	WO 1992-GB1640	19920909 <--
W: AU, BB, BG, BR, CA, CS, FI, HU, JP, KP, KR, LK, MG, MN, MW, NO, PL, RO, RU, SD, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, SN, TD, TG				
AU 9225167	A1	19930405	AU 1992-25167	19920909 <--
AU 663726	B2	19951019		
EP 603250	A1	19940629	EP 1992-919119	19920909 <--
R: AT, BE, DE, DK, FR, GB, IE, IT, LU, MC, NL, SE				
JP 06510429	T2	19941124	JP 1992-505067	19920909 <--
BR 9206481	A	19951031	BR 1992-6481	19920909 <--
US 5959178	A	19990928	US 1994-204288	19941027 <--
PRAI GB 1991-19279	A	19910910		
WO 1992-GB1640	A	19920909		

AB A method for regulation of lignin biosynthesis in plants comprises stably incorporating into the plant genome a gene for ***caffeic*** ***acid*** ***O*** - ***methyltransferase*** (***COMT***) in sense or antisense orientation under the control of a ***promoter*** operative in plants. The cDNA for poplar and tobacco COMTs were cloned and sequenced. Transgenic poplar expressing antisense ***COMT*** genes were prepd. and analyzed for lignin biosynthesis. Lignin biosynthesis was 2-3-fold lower in these transgenic poplars, but there was no correlation between the reduced ***COMT*** activity and the amt. of antisense RNA present in the plants.

L6 ANSWER 29 OF 32 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN DUPLICATE 13
AN 94012361 EMBASE <<LOGINID::20061117>>
DN 1994012361
TI Production of rat soluble and membrane-bound catechol O-methyltransferase forms from bifunctional mRNAs.
AU Tenhunen J.; Ulmanen I.
CS Orion-Farmos Pharmaceuticals, Research Center, Valimotie 7,00380 Helsinki, Finland
SO Biochemical Journal, (1993) Vol. 296, No. 3, pp. 595-600. .
ISSN: 0264-6021 CODEN: BIJOAK
CY United Kingdom
DT Journal; Article
FS 029 Clinical Biochemistry
LA English
SL English
ED Entered STN: 30 Jan 1994
Last Updated on STN: 30 Jan 1994
AB In the rat, the catechol O-methyltransferase (***COMT***) gene has been found to contain two promoters, P1 and P2. This organization enables the gene to produce a soluble (S- ***COMT***) and a membrane-associated (MB- ***COMT***) protein by using two in-frame ATG initiation codons (S- and MB-ATG). The P1 ***promoter*** expresses a 1.6 kb transcript (S-mRNA) which codes for the S- ***COMT*** polypeptide only. Here we demonstrate that the P2 ***promoter*** controls the expression of alternatively spliced 1.9 kb transcripts (MB-mRNA) which differ by a 27-nucleotide region immediately upstream of the MB-AUG codon. The presence of the 27-base sequence alters the nucleotide at position 3 from G to C, thereby changing the translation initiation context of the MB-AUG codon. Expression experiments in COS-7 cells using full-length ***COMT*** cDNAs showed that this alteration affected the initiation of the translation of the MB-AUG and consequently changed the relative amounts of MB- and S- ***COMT*** polypeptides produced. No proteolytic cleavage of the MB- ***COMT*** form to S- ***COMT*** was detected in in vitro or in vivo pulse-chase experiments. We conclude that the bifunctional 1.9 kb mRNAs are able to produce both S- ***COMT*** and MB- ***COMT*** polypeptide by the leaky scanning mechanism of translation initiation.

L6 ANSWER 30 OF 32 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN DUPLICATE 14
AN 93121007 EMBASE <<LOGINID::20061117>>
DN 1993121007
TI Structure of the rat catechol-O-methyltransferase gene: Separate promoters are used to produce mRNAs for soluble and membrane-bound forms of the enzyme.
AU Tenhunen J.; Salminen M.; Jalanko A.; Ukkonen S.; Ulmanen I.
CS Laboratory of Molecular Genetics, Orion-Farmos Pharmaceuticals, Valimotie 7,00380 Helsinki, Finland
SO DNA and Cell Biology, (1993) Vol. 12, No. 3, pp. 253-263. .
ISSN: 1044-5498 CODEN: DCEBE8
CY United States
DT Journal; Article
FS 022 Human Genetics
029 Clinical Biochemistry
LA English
SL English
ED Entered STN: 30 May 1993
Last Updated on STN: 30 May 1993
AB The enzyme catechol-O-methyltransferase (***COMT***) catalyzes the inactivation of catechol-containing molecules by methylation. The cDNAs for the rat and human ***COMT*** have recently been cloned and recombinant proteins expressed in prokaryotic and eukaryotic cells. We describe here the structure of the rat ***COMT*** gene and its 5'-flanking sequences. The gene spans at least 13 kb and is composed of 5 exons, the first one noncoding. The two ATG codons for the initiation of translation of the membrane-bound (MB- ***COMT***) and soluble (S- ***COMT***) forms of the enzyme reside in the second exon. The gene

expresses two mRNA species of 1.6 kb and 1.9 kb that have different tissue distributions. The expression of the transcripts is regulated by at least two promoters, P1 and P2. The P1 ***promoter*** expresses the shorter transcript in a tissue- specific manner and is located between the ATG codons in the coding region of the longer transcript. The P2 ***promoter*** is constitutive and responsible for the expression of the longer transcript. The shorter 1.6-kb mRNA (S-mRNA) produces only the S- ***COMT*** polypeptide, whereas the longer 1.9-kb mRNA (MB- mRNA) is able to direct synthesis of both forms of the ***COMT*** enzyme.

L6 ANSWER 31 OF 32 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN DUPLICATE 15
AN 92181614 EMBASE <<LOGINID::20061117>>
DN 1992181614
TI Expression of functional membrane-bound and soluble catechol-O-methyltransferase in Escherichia coli and a mammalian cell line.
AU Malherbe P.; Bertocci B.; Caspers P.; Zurcher G.; Da Prada M.
CS Pharma Division, Preclinical Research, F. Hoffmann-La Roche Ltd.,CH-4002 Basel, Switzerland
SO Journal of Neurochemistry, (1992) Vol. 58, No. 5, pp. 1782-1789. . ISSN: 0022-3042 CODEN: JONRA
CY United States
DT Journal; Article
FS 004 Microbiology
008 Neurology and Neurosurgery
022 Human Genetics
029 Clinical Biochemistry
LA English
SL English
ED Entered STN: 19 Jul 1992
Last Updated on STN: 19 Jul 1992
AB Human catechol-O-methyltransferase (hCOMT) cDNA was used to express the recombinant hCOMT enzyme in sufficient quantities in prokaryotic as well as in eukaryotic cells to allow kinetic studies. When human membrane-bound catechol-O-methyltransferase (MB- ***COMT*** ; amino acids 1-271) and the soluble catechol-O-methyltransferase ***COMT*** (S- ***COMT*** ; .DELTA. membrane anchor hCOMT; amino acids 27-271), with the latter lacking the first 26 hydrophobic amino acids, were expressed in Escherichia coli, a relatively high-level synthesis of catalytically active enzymes was obtained. Insertion of the human MB- ***COMT*** - coding sequence into an eukaryotic expression vector under transcriptional control of the cytomegalovirus (CMV) ***promoter*** and enhancer yielded large quantities of hCOMT in human kidney 293 cells. Subcellular fractionation of 293 cells transfected with pBC12/CMV-hCOMT showed hCOMT to be located predominantly in the membrane fraction. The catechol-O-methyltransferase (***COMT***) activity was measured in cytosolic and membrane fractions at 37.degree.C, giving values of 33 and 114 units/mg of protein, respectively (1 unit produces 1 nmol of guaiacol/h). K(m) values were 10 .mu.M for MB- ***COMT*** and 108 .mu.M for S- ***COMT*** , indicating that recombinant MB- ***COMT*** exhibits a higher affinity for catechol as the substrate than the soluble form. RNA blot analysis of human hepatome cells (Hep G2), kidney, liver, and fetal brain revealed only one species of hCOMT mRNA of .apprx.1.4 kb. Its level in these various tissues was similar to those of ***COMT*** protein in each tissue. Using the polymerase chain reaction (PCR) with primers surrounding the putative membrane anchor region, we have clearly identified a single-size PCR product generated from hCOMT mRNA of various human tissues. Hence, the two forms of the enzyme cannot be the products of an alternative splicing of transcripts. We suggest that S- ***COMT*** is generated by proteolytic cleavage between the NH2- terminal membrane anchor and the catalytic domain of the membrane-bound form. Lack of the N-terminal fragments reduces the catalytic activity of the enzyme.

L6 ANSWER 32 OF 32 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN DUPLICATE 16
AN 91088661 EMBASE <<LOGINID::20061117>>
DN 1991088661
TI Human catechol-O-methyltransferase: Cloning and expression of the membrane-associated form.
AU Bertocci B.; Miggiano V.; Da Prada M.; Dembic Z.; Lahm H.-W.; Malherbe P.
CS Pharma Res. Central Nerv. Sys., Central Research Units, F. Hoffmann-La Roche Ltd,CH-4002 Basel, Switzerland
SO Proceedings of the National Academy of Sciences of the United States of America, (1991) Vol. 88, No. 4, pp. 1416-1420. . ISSN: 0027-8424 CODEN: PNASA6
CY United States
DT Journal; Article
FS 029 Clinical Biochemistry
LA English
SL English
ED Entered STN: 16 Dec 1991
Last Updated on STN: 16 Dec 1991
AB A cDNA clone for human catechol-O-methyltransferase (hCOMT; S-adenosyl-L-methionine:catechol O-methyltransferase; EC 2.1.1.6) was isolated from a human hepatoma cell line (Hep G2) cDNA library by hybridization screening with a porcine cDNA probe. The cDNA clone was sequenced and found to have an insert of 1226 nucleotides. The deduced primary structure of hCOMT is composed of 271 amino acid residues with the predicted molecular mass of 30 kDa. At its N terminus it has a hydrophobic segment of 21 amino acid residues that may be responsible for insertion of hCOMT into the endoplasmic reticulum membrane. The primary structure of hCOMT exhibits high homology to the porcine partial cDNA sequence (93%). The deduced amino acid sequence contains two tryptic peptide sequences (T-22, T-33) found in porcine liver catechol-O-methyltransferase (***COMT***). The coding region of hCOMT cDNA was placed under the control of the cytomegalovirus ***promoter*** to transfect human kidney 293 cells. The endogenous ***COMT*** activity, which was .simeq.9.98 units per mg of protein in the untransfected cells, increased to 206 units per mg of protein upon transfection with a plasmid containing the ***COMT*** cDNA. The ***COMT*** activity of recombinant protein was inhibited competitively (IC50 = 700 nM) by the selective ***COMT*** inhibitor Ro 40-7592. An anti- ***COMT*** monoclonal antibody recognized, on immunoblots, a major polypeptide with apparent molecular mass of 29 kDa, in reasonable agreement with the predicted molecular mass. The recombinant hCOMT was shown by immunoblot analysis to be mainly associated with the membrane fraction. RNA blot analysis revealed one ***COMT*** mRNA transcript of 1.4 kilobases in Hep G2 poly(A)+ RNA.

=> s l4 and vascula?
L7 22 L4 AND VASCULA?

=> dup rem l7
PROCESSING COMPLETED FOR L7
L8 20 DUP REM L7 (2 DUPLICATES REMOVED)

=> d bib abs 1-
YOU HAVE REQUESTED DATA FROM 20 ANSWERS - CONTINUE? Y/(N):y

L8 ANSWER 1 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:902703 CAPLUS <<LOGINID::20061117>>
DN 143:272498
TI Gene expression profiles in the diagnosis and treatment of Alzheimer's disease
IN Landfield, Philip W.; Porter, Nada M.; Chen, Kuey Chu; Geddes, James; Blalock, Eric
PA University of Kentucky Research Foundation, USA
SO PCT Int. Appl., 114 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005076939	A2	20050825	WO 2005-US3668	20050209
WO 2005076939	A3	20060706		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, SM
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2004-542281P P 20040209
AB Genes showing altered patterns of expression in the brain that are assocd. with the neurol. changes found in Alzheimer's disease and that can be used in the early diagnosis of the disease, including the incipient form of the disease, are identified. The methods and kits of the invention utilize a set of genes and their encoded proteins that are shown to be correlated with incipient Alzheimer's disease.

L8 ANSWER 2 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:98977 CAPLUS <<LOGINID::20061117>>
DN 142:192341
TI Eucalyptus grandis ***caffeic*** ***acid*** ***O*** -***methyltransferase*** gene ***promoter*** and methods for the modification of gene expression in ***vascular*** tissue
IN Perera, Ranjan; Rice, Stephen James; Eagleton, Clare Katherine
PA Genesis Research and Development Corporation Limited, N. Z.; Rubicon Forests Holdings Limited
SO U.S. Pat. Appl. Publ., 82 pp., Cont.-in-part of U.S. Ser. No. 291,447.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 8

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2005026162	A1	20050203	US 2003-702319	20031106
US 6380459	B1	20020430	US 1999-276599	19990325
WO 2000058474	A1	20001005	WO 2000-NZ18	20000224

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 6596925	B1	20030722	US 2000-598401	20000620
ZA 2001007442	A	20020312	ZA 2001-7442	20010910

US 2003101478 A1 20030529 US 2002-137036 20020430
US 2003091981 A1 20030515 US 2002-291447 20021108
PRAI US 1999-276599 A2 19990325
US 1999-146591P P 19990730
WO 2000-NZ18 A2 20000224
US 2000-598401 A2 20000620
US 2000-724624 B2 20001128
US 2001-345397P P 20011109
US 2002-137036 A2 20020430
US 2002-291447 A2 20021108
US 2002-425087P P 20021108
WO 2001-NZ115 W 20010620
AB The invention claims ***vascular*** tissue-specific plant polynucleotide ***promoter*** sequences and genetic constructs comprising such polynucleotides. Specifically, the invention claims sequences for Eucalyptus grandis ***cOMT*** (***caffeic*** ***acid*** ***O*** - ***methyltransferase***) gene ***promoter*** , which is involved in lignin biosynthesis. The invention further claims methods for using such constructs in modulating the transcription of DNA sequences of interest, together with transgenic plants comprising such constructs. Eucalyptus gene ***cOMT*** ***promoter*** activity was demonstrated in transfected Zinnia elegans mesophyll cells using the GUS reporter gene. ***Vascular*** tissue-specific expression of the ***promoter*** was shown in transgenic Nicotiana benthamiana using an OMT ***promoter*** -GUS construct.

L8 ANSWER 3 OF 20 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 2006:73506 BIOSIS <<LOGINID::20061117>>
DN PREV200600075095
TI Does lignin modification affect feeding preference or growth performance of insect herbivores in transgenic silver birch (Betula pendula Roth)?.
AU Tiimonen, Heidi [Reprint Author]; Aronen, Tuija; Laakso, Tapio; Saranpaa, Pekka; Chiang, Vincent; Ylioja, Tiina; Roininen, Heikki; Haggman, Hely
CS Finnish Forest Res Inst, Punkaharju Res Stn, Finlandiantie 18, Punkaharju 58450, Finland
heidi.tiimonen@metla.fi
SO Planta (Berlin), (NOV 2005) Vol. 222, No. 4, pp. 699-708.
CODEN: PLANAB. ISSN: 0032-0935.
DT Article
LA English
ED Entered STN: 19 Jan 2006
Last Updated on STN: 19 Jan 2006
AB Transgenic silver birch (Betula pendula Roth) lines were produced in order to modify lignin biosynthesis. These lines carry ***COMT*** (caffeate/5-hydroxyferulate O-methyltransferase) gene from Populus tremuloides driven by constitutive ***promoter*** 35S CaMV (cauliflower mosaic virus) or UbB1 (ubiquitin ***promoter*** from sunflower). The decreased syringyl/guaiacyl (S/G) ratio was found in stem and leaf lignin of 35S CaMV-PtCOMT transgenic silver birch lines when compared to non-transformed control or UbB1-PtCOMT lines. In controlled feeding experiments the leaves of transgenic birch lines as well as controls were fed to insect herbivores common in boreal environment, i.e., larvae of Aethalura punctulata, Cleora cinctaria and Trichopteryx carpinata (Lepidoptera: Geometridae) as well as the adults of birch leaf-feeding beetles Agelastica alni (Coleoptera: Chrysomelidae) and Phyllobius spp. (Coleoptera: Curculionidae). The feeding preferences of these herbivores differed in some cases among the tested birch lines, but these differences could not be directly associated to lignin modification. They could as well be explained by other characteristics of leaves, either natural or caused by transgene site effects. Growth performance of lepidopteran larvae fed on transgenic or control leaves did not differ significantly.

L8 ANSWER 4 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:612477 CAPLUS <<LOGINID::20061117>>
DN 141:135240
TI Sequences of ***vascular*** -preferred ***promoter*** sequences and use in woody plants
IN Phillips, Jonathan; Eagleton, Clare
PA Arborgen, LLC, USA
SO U.S. Pat. Appl. Publ., 32 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 8

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2004146904	A1	20040729	US 2003-703091	20031107
PRAI US 2002-425087P	P	20021108		

AB The invention provides seven ***vascular*** -preferred promoters from Eucalyptus grandis. Methods for using the inventive constructs for regulating gene expression are provided, along with transgenic plants comprising the inventive constructs.

L8 ANSWER 5 OF 20 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 2005:45462 BIOSIS <<LOGINID::20061117>>
DN PREV200500044506
TI Activation of phenylpropanoid metabolism in sesame by over-expression of carrot calmodulin gene.
AU Mitsuma, Satoru; Ishigaki, Eriko; Sugiyama, Ryuji; Asamizu, Tetsuya; Yamada, Kyoji; Kurosaki, Fumiya [Reprint Author]
CS Fac Pharmaceut Sci, Toyama Med and Pharmaceut Univ, Sugitani, Toyama, 9300194, Japan
kurosaki@ms.toyama-mpu.ac.jp
SO Biological & Pharmaceutical Bulletin, (October 2004) Vol. 27, No. 10, pp. 1621-1625. print.
ISSN: 0918-6158.
DT Article
LA English
ED Entered STN: 26 Jan 2005
Last Updated on STN: 26 Jan 2005
AB Transgenic sesame (Sesamum schinzianum ASCH.) was produced by Agrobacterium-mediated transfection of a carrot calmodulin gene, cam-4, which was specifically expressed upon the contact of carrot cells with oligogalacturonide elicitor. Coding region of cam-4 was ligated to the downstream of 35S ***promoter*** of cauliflower mosaic virus and subcloned into pMATGBO-DB3.1. A. tumefaciens 4404 was transformed with the constructed vector, and the crown gall tissues formed in the sesame seedlings were transferred onto appropriate media to obtain the re-differentiated plants. The reverse-transcription polymerase chain reaction followed by Southern blot analysis revealed that cam-4 gene was appreciably expressed in the transgenic plants. Activities of two key enzyme regulating phenylpropanoid metabolisms, phenylalanine ammonia-lyase and ***caffeic*** ***acid*** ***O*** - ***methyltransferase*** , and the contents of phenolic compounds in the transformed sesame were markedly elevated as compared with those of the control. These results suggest that the over-expression of cam-4 gene enhances the biosynthetic activities of phenylpropane derivatives in the transformed sesame plants.

L8 ANSWER 6 OF 20 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 2005:110882 BIOSIS <<LOGINID::20061117>>
DN PREV200500110402
TI AtMYB32 is required for normal pollen development in Arabidopsis thaliana.
AU Preston, Jeremy; Wheeler, Janet; Heazlewood, Joshua; Li, Song Feng; Parish, Roger W. [Reprint Author]
CS Sch Life SciDept Bot, La Trobe Univ, Bundoora, Vic, 3083, Australia
r.parish@latrobe.edu.au
SO Plant Journal, (December 2004) Vol. 40, No. 6, pp. 979-995. print.
ISSN: 0960-7412 (ISSN print).
DT Article
LA English
ED Entered STN: 23 Mar 2005
Last Updated on STN: 23 Mar 2005
AB AtMYB32 gene is a member of the R2R3 MYB gene family coding for transcription factors in Arabidopsis thaliana. Its expression pattern was analysed using Northern blotting, in situ hybridization and ***promoter*** -GUS fusions. AtMYB32 is expressed in many tissues, but most strongly in the anther tapetum, stigma papillae and lateral root primordia. AtMYB32-GUS was induced in leaves and stems following wounding, and in root primordia by auxin. T-DNA insertion populations were screened and two insertion mutants were identified, both of which were partially male sterile, more than 50% of the pollen grains being distorted in shape and lacking cytoplasm. AtMYB4 is closely related to AtMYB32 and represses the CINNAMATE 4-HYDROXYLASE gene. Distorted pollen grains were produced in both AtMYB4 insertion mutant and overexpression lines. In an AtMYB32 insertion mutant, the transcript levels of the DIHYDROFLAVONOL 4-REDUCTASE and ANTHOCYANIDIN SYNTHASE genes decreased while the level of the CAFFEIC ACID 0-METHYLTRANSFERASE transcript increased. Change in the levels of AtMYB32 and AtMYB4 expression may influence pollen development by changing the flux along the phenylpropanoid pathways, affecting the composition of the pollen wall.

L8 ANSWER 7 OF 20 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
DUPLICATE 1
AN 2003:300708 BIOSIS <<LOGINID::20061117>>
DN PREV200300300708
TI A new Arabidopsis thaliana mutant deficient in the expression of O-methyltransferase impacts lignins and sinapoyl esters.
AU Goujon, Thomas; Sibout, Richard; Pollet, Brigitte; Maba, Bruno; Nussaume, Laurent; Bechtold, Nicole; Lu, Fachuang; Ralph, John; Mila, Isabelle; Barriere, Yves; Lapierre, Catherine; Jouanin, Lise [Reprint Author]
CS Biologie Cellulaire, INRA, 78026, Versailles Cedex, France
jouanin@versailles.inra.fr
SO Plant Molecular Biology, (April 2003) Vol. 51, No. 6, pp. 973-989. print.
ISSN: 0167-4412 (ISSN print).
DT Article
LA English
ED Entered STN: 25 Jun 2003
Last Updated on STN: 25 Jun 2003
AB A ***promoter*** -trap screen allowed us to identify an Arabidopsis line expressing GUS in the root ***vascular*** tissues. T-DNA border sequencing showed that the line was mutated in the ***caffeic*** ***acid*** ***O*** - ***methyltransferase*** 1 gene (AtOMT1) and therefore deficient in OMT1 activity. Atomt1 is a knockout mutant and the expression profile of the AtOMT1 gene has been determined as well as the consequences of the mutation on lignins, on soluble phenolics, on cell wall digestibility, and on the expression of the genes involved in monolignol biosynthesis. In this mutant and relative to the wild type, lignins lack syringyl (S) units and contain more 5-hydroxyguaiacyl units

(5-OH-G), the precursors of S-units. The sinapoyl ester pool is modified with a two-fold reduction of sinapoyl-malate in the leaves and stems of mature plants as well as in seedlings. In addition, LC-MS analysis of the soluble phenolics extracted from the seedlings reveals the occurrence of unusual derivatives assigned to 5-OH-feruloyl malate and to 5-OH-feruloyl glucose. Therefore, AtOMT1 enzymatic activity appears to be involved not only in lignin formation but also in the biosynthesis of sinapate esters. In addition, a deregulation of other monolignol biosynthetic gene expression can be observed in the Atomt1 mutant. A poplar cDNA encoding a caffeic acid OMT (PtOMT1) was successfully used to complement the Atomt1 mutant and restored both the level of S units and of sinapate esters to the control level. However, the over-expression of PtOMT1 in wild-type Arabidopsis did not increase the S-lignin content, suggesting that OMT is not a limiting enzyme for S-unit biosynthesis.

L8 ANSWER 8 OF 20 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 2003:489089 BIOSIS <<LOGINID::20061117>>
DN PREV200300491162
TI Structure of the tobacco ***caffeic*** ***acid*** ***O*** - ***methyltransferase*** (***COMT***) II gene: Identification of ***promoter*** sequences involved in gene inducibility by various stimuli.
AU Toquin, Valerie; Grausem, Bernard; Geoffroy, Pierrette; Legrand, Michel [Reprint Author]
CS Institut de Biologie Moleculaire des Plantes du CNRS, UPR 2357, Universite Louis Pasteur, 12, Rue du General Zimmer, 67000, Strasbourg, France michel.legrand@ibmp-ulp.u-strasbg.fr
SO Plant Molecular Biology, (June 2003) Vol. 52, No. 3, pp. 495-509. print. ISSN: 0167-4412 (ISSN print).
DT Article
LA English
ED Entered STN: 22 Oct 2003
Last Updated on STN: 22 Oct 2003
AB The tobacco gene encoding ***caffeic*** ***acid*** - ***O*** - ***methyltransferase*** of class II (***COMT*** II) was isolated, including a 1.7 kb 5'-flanking region. Sequence motifs were identified in ***COMT*** II gene ***promoter*** which are present in many genes of the phenylpropanoid pathway or in stress-inducible pathogenesis-related (PR) genes. A 1215 bp ***COMT*** II ***promoter*** fragment was transcriptionally fused to the GUS coding region and its activity pattern studied by stable expression of the fusion gene in tobacco. Transgenic lines were analysed for GUS and OMT activities upon infection, UV irradiation, wounding and treatment by various signalling compounds. The ***promoter*** proved responsive to various biotic and abiotic elicitors and to infection by avirulent and virulent pathogens. During the course of the hypersensitive reaction of tobacco to TMV two peaks were detected, an early one induced by the inoculation process and a second one at the onset of lesion formation. Parallel changes were observed between GUS activity that reflected the activity of the ***COMT*** II ***promoter*** fragment and ***COMT*** II activity that mirrored expression of the endogenous ***COMT*** II gene, indicating that ***COMT*** II pattern of expression is established at the transcriptional level. Various ***promoter*** fragments were fused to the GUS gene and revealed that gene induction by MeJA or UV and by TMV or wounding requires different sequences included in a 74 bp fragment. When the 74 bp sequence was multimerized and inserted ahead of the CaMV 35S RNA minimal ***promoter*** , one construct was shown to be capable of driving expression of the reporter gene around the TMV-infected sites in transgenic tobacco plants.

L8 ANSWER 9 OF 20 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
DUPLICATE 2
AN 2003:101629 BIOSIS <<LOGINID::20061117>>
DN PREV200300101629
TI Down-regulation of ***caffeic*** ***acid*** ***O*** - ***methyltransferase*** in maize revisited using a transgenic approach.
AU Piquemal, Joel; Chamayou, Simon; Nadaud, Isabelle; Beckert, Michel; Barriere, Yves; Mila, Isabelle; Lapierre, Catherine; Rigau, Joan; Puigdomenech, Pere; Jauneau, Alain; Digonnet, Catherine; Boudet, Alain-Michel; Goffner, Deborah; Pichon, Magalie [Reprint Author]
CS Signaux et Messages Cellulaires chez les Vegetaux, Pole de Biotechnologie Vegetale, Unite Mixte de Recherche, Centre National de la Recherche Scientifique-Universite Paul Sabatier 5546, 24 Chemin de Borde Rouge, 31326, Castanet Tolosan, France pichon@smcv.ups-tlse.fr
SO Plant Physiology (Rockville), (December 2002) Vol. 130, No. 4, pp. 1675-1685. print. ISSN: 0032-0889 (ISSN print).
DT Article
LA English
ED Entered STN: 19 Feb 2003
Last Updated on STN: 19 Feb 2003
AB Transgenic maize (Zea mays) plants were generated with a construct harboring a maize ***caffeic*** ***acid*** ***O*** - ***methyltransferase*** (***COMT***) cDNA in the antisense (AS) orientation under the control of the maize Adh1 (alcohol dehydrogenase) ***promoter*** . Adh1-driven beta-glucuronidase expression was localized in ***vascular*** tissues and lignifying sclerenchyma, indicating its suitability in transgenic experiments aimed at modifying lignin content and composition. One line of AS plants, ***COMT*** -AS, displayed a significant reduction in ***COMT*** activity (15%-30% residual activity) and barely detectable amounts of ***COMT*** protein as determined by western-blot analysis. In this line, transgenes were shown to be stably integrated in the genome and transmitted to the progeny. Biochemical analysis of ***COMT*** -AS showed: (a) a strong decrease in Klason lignin content at the flowering stage, (b) a decrease in syringyl units, (c) a lower p-coumaric acid content, and (d) the occurrence of unusual 5-OH guaiacyl units. These results are reminiscent of some characteristics already observed for the maize bm3 (brown-midrib3) mutant, as well as for ***COMT*** down-regulated dicots. However, as compared with bm3, ***COMT*** down-regulation in the ***COMT*** -AS line is less severe in that it is restricted to sclerenchyma cells. To our knowledge, this is the first time that an AS strategy has been applied to modify lignin biosynthesis in a grass species.

L8 ANSWER 10 OF 20 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 2001:243019 BIOSIS <<LOGINID::20061117>>
DN PREV200100243019
TI Antisense suppression of the lignin biosynthetic enzyme, caffeate O-methyltransferase, improves in vitro digestibility of the tropical pasture legume, Stylosanthes humilis.
AU Rae, Anne L. [Reprint author]; Manners, John M.; Jones, Raymond J.; McIntyre, C. Lynne; Lu, De-Yang
CS CSIRO Plant Industry at Long Pocket Laboratory, 120 Meiers Road, Indooroopilly, Brisbane, QLD, 4068, Australia Anne.Rae@pi.csiro.au
SO Australian Journal of Plant Physiology, (2001) Vol. 28, No. 4, pp. 289-297. print. CODEN: AJPPCH. ISSN: 0310-7841.
DT Article
LA English
ED Entered STN: 23 May 2001
Last Updated on STN: 19 Feb 2002
AB The high lignin content of tropical forage plants reduces digestibility and voluntary feed intake by ruminants. We have used antisense technology to suppress caffeate O-methyltransferase (***COMT*** EC, 2.1.1.68), a lignin biosynthetic enzyme in the tropical forage legume, Stylosanthes humilis Kunth. Plants were transformed using a Ti binary vector containing an antisense ***COMT*** construct under the control of the CaMV 35S ***promoter*** . From 50 transgenic plants, five were selected on the basis of normal morphology, high levels of antisense gene expression and altered lignin histochemistry. No plants with altered lignin were observed in a population of 20 transgenic plants derived using a binary vector that lacked the ***COMT*** cDNA insert. The progeny of lignin-altered plants were analysed for ***COMT*** enzyme activity and lignin histochemistry. A variety of ***COMT*** and lignin phenotypes was observed. In several T1 plants, ***COMT*** activity was specifically suppressed by more than 95% compared to controls. In these plants, expression of antisense mRNA was high while sense mRNA could not be detected on northern blots. The overall lignin content of these plants was unchanged but histochemical tests showed abnormally low levels of the syringyl component, mimicking the pattern of young tissue. Digestibility of these transgenic plants was assessed by incubation of stem material with rumen fluid and acid pepsin in vitro. The digestibility of the antisense material was increased dramatically compared to that of equivalent samples from control transformed plants (72 vs 62%).

L8 ANSWER 11 OF 20 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 2001:344668 BIOSIS <<LOGINID::20061117>>
DN PREV200100344668
TI Overexpression of a heterologous sam gene encoding S-adenosylmethionine synthetase in flax (Linum usitatissimum) cells: Consequences on methylation of lignin precursors and pectins.
AU Lamblin, Frederic; Saladin, Gaelle; Dehorter, Bertrand; Cronier, David; Grenier, Emmanuel; Lacoux, Jerome; Bruyant, Philippe; Laine, Eric [Reprint author]; Chabbert, Brigitte; Girault, Fabienne; Monties, Bernard; Morvan, Claudine; David, Helene; David, Alain
CS Laboratoire de Biotechnologie et Physiologie Vegetales, Faculte des Sciences, Universite de Picardie Jules Verne, 33 Rue Saint-Leu, F-80039, Amiens Cedex, France eric.laine@sc.u-picardie.fr
SO Physiologia Plantarum, (June, 2001) Vol. 112, No. 2, pp. 223-232. print. CODEN: PHPLAI. ISSN: 0031-9317.
DT Article
LA English
ED Entered STN: 25 Jul 2001
Last Updated on STN: 19 Feb 2002
AB The Arabidopsis thaliana sam1 gene encoding S-adenosylmethionine synthetase (EC 2.5.1.6) was transferred to flax (Linum usitatissimum) cells via Agrobacterium tumefaciens. This enzyme catalyses the conversion of methionine to S-adenosylmethionine (SAM), the major methyl group donor in living cells. The aim of this work was to study the consequences of an increased SAM-synthetase (SAM-S) activity in transgenic cell lines on both the production of mono- and dimethoxylated lignin monomers and the degree of methylesterification of pectins. Hypocotyls were cocultivated with Agrobacterium tumefaciens strain GV3101 (pGV2260) harbouring the pO35SSAM binary vector carrying the sam1 gene under the control of the 35S

promoter and the nptII gene for selection of putative transformed cells. Most of the transgenic cell lines exhibited a significant (up to 3.2-fold) increase in SAM-S activity compared to the controls. The results showed that for the cell lines analysed this transformation had no effect on ***caffeic*** ***acid*** ***O*** - ***methyltransferase*** (***COMT*** , EC 2.1.1.68) in vitro activity, degree of methoxylation of lignin precursors or lignin deposition, pectin methyltransferase (PMT, EC 2.1.1) in vitro activity, but led to an increase of pectin methylesterification in friable and fast-growing transgenic cell lines.

L8 ANSWER 12 OF 20 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 2001:220250 BIOSIS <<LOGINID::20061117>>
DN PREV200100220250
TI Downregulation of caffeic acid 3-O-methyltransferase and caffeoyl CoA 3-O-methyltransferase in transgenic alfalfa: Impacts on lignin structure and implications for the biosynthesis of G and S lignin.
AU Guo, Dianjing; Chen, Fang; Inoue, Kentaro; Blount, Jack W.; Dixon, Richard A. [Reprint author]
CS Plant Biology Division, Samuel Roberts Noble Foundation, Ardmore, OK, 73401, USA
radixon@noble.org
SO Plant Cell, (January, 2001) Vol. 13, No. 1, pp. 73-88. print.
CODEN: PLCEEW. ISSN: 1040-4651.
DT Article
LA English
ED Entered STN: 9 May 2001
Last Updated on STN: 18 Feb 2002
AB Transgenic alfalfa plants were generated harboring caffeic acid 3-O-methyltransferase (***COMT***) and caffeoyl CoA 3-O-methyltransferase (CCOMT) cDNA sequences under control of the bean phenylalanine ammonia-lyase PAL2 ***promoter*** . Strong downregulation of ***COMT*** resulted in decreased lignin content, a reduction in total guaiacyl (G) lignin units, a near total loss of syringyl (S) units in monomeric and dimeric lignin degradation products, and appearance of low levels of 5-hydroxy guaiacyl units and a novel dimer. No soluble monolignol precursors accumulated. In contrast, strong downregulation of CCOMT led to reduced lignin levels, a reduction in G units without reduction in S units, and increases in beta-5 linked dimers of G units. Accumulation of soluble caffeic acid beta-D-glucoside occurred only in CCOMT downregulated plants. The results suggest that CCOMT does not significantly contribute to the 3-O-methylation step in S lignin biosynthesis in alfalfa and that there is redundancy with respect to the 3-O-methylation reaction of G lignin biosynthesis. ***COMT*** is unlikely to catalyze the in vivo methylation of caffeic acid during lignin biosynthesis.

L8 ANSWER 13 OF 20 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 2000:452023 BIOSIS <<LOGINID::20061117>>
DN PREV200000452023
TI Lignification in transgenic poplars with extremely reduced ***caffeic*** ***acid*** ***O*** - ***methyltransferase*** activity.
AU Jouanin, Lise [Reprint author]; Goujon, Thomas; de Nadai, Veronique; Martin, Marie-Therese; Mila, Isabelle; Vallet, Christelle; Pollet, Brigitte; Yoshinaga, Arata; Chabbert, Brigitte; Petit-Conil, Michel; Lapierre, Catherine
CS Biologie Cellulaire, Institut National de la Recherche Agronomique, 78026, Versailles Cedex, France
SO Plant Physiology (Rockville), (August, 2000) Vol. 123, No. 4, pp. 1363-1373. print.
CODEN: PLPHAY. ISSN: 0032-0889.
DT Article
LA English
ED Entered STN: 25 Oct 2000
Last Updated on STN: 10 Jan 2002
AB Transgenic poplars (Populus tremula X Populus alba) were obtained by introduction of a sense homologous transgene encoding ***caffeic*** ***acid*** ***O*** - ***methyltransferase*** (***COMT***) under the control either of the cauliflower mosaic virus double 35S ***promoter*** or of the eucalyptus cinnamyl alcohol dehydrogenase ***promoter*** . Although these constructs conferred a moderate overexpression of ***COMT*** in some lines, a transgenic line with the double 35S ***promoter*** was found where ***COMT*** activity in woody tissues was close to zero due to a gene-silencing phenomenon. For the first time in ***COMT*** down-regulated trees, this alteration substantially reduced lignin level in 6-month-old trees (17% decrease). Lignin structure was found to be strongly altered, with a two times higher content in condensed bonds, an almost complete lack of syringyl units, and the incorporation of 5-hydroxyguaiacyl units to the most remarkable extent reported so far. Consistent with the higher cellulose content and with the higher condensation degree of the lignin, the impact of the transformation on the kraft-pulping performances of the poplar trees positively affected the pulp yield (10% relative increase), but made lignins less amenable to industrial degradations.

L8 ANSWER 14 OF 20 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 2000:360314 BIOSIS <<LOGINID::20061117>>
DN PREV200000360314
TI Secondary xylem-specific expression of caffeoyl-coenzyme A 3-O-methyltransferase plays an important role in the methylation pathway associated with lignin biosynthesis in loblolly pine.
AU Li, Laigeng; Osakabe, Yuriko; Joshi, Chandrashekhar P. [Reprint author]; Chiang, Vincent L.
CS Plant Biotechnology Research Center, School of Forestry and Wood Products, Michigan Technological University, Houghton, MI, 49931, USA
SO Plant Molecular Biology, (July, 2000) Vol. 40, No. 4, pp. 555-565. print.
CODEN: PMBIDB. ISSN: 0167-4412.
DT Article
LA English
OS Genbank-AF036095; EMBL-AF036095; DDBJ-AF036095; Genbank-AF098159;
EMBL-AF098159; DDBJ-AF098159
ED Entered STN: 23 Aug 2000
Last Updated on STN: 8 Jan 2002
AB Two types of structurally distinct O-methyltransferases mediate the methylation of hydroxylated monomeric lignin precursors in angiosperms. Caffeate 3-O-methyltransferase (***COMT*** ; EC 2.1.1.68) methylates the free acids and caffeoyl CoA 3-O-methyltransferase (CCoAOMT; EC 2.1.1.104) methylates coenzyme A esters. Recently, we reported a novel hydroxycinnamic acid/hydroxycinnamoyl CoA ester O-methyltransferase (AEOMT) from loblolly pine differentiating xylem that was capable of methylating both acid and ester precursors with similar efficiency. In order to determine the possible existence and role of CCoAOMT in lignin biosynthesis in gymnosperms, a 1.3 kb CCoAOMT cDNA was isolated from loblolly pine that showed 79-82% amino acid sequence identity with many angiosperm CCoAOMTs. The recombinant CCoAOMT expressed in Escherichia coli exhibited a significant methylating activity with hydroxycinnamoyl CoA esters whereas activity with hydroxycinnamic acids was insignificant. Moreover, 3.2 times higher catalytic efficiency for methylating caffeoyl CoA over 5-hydroxyferuloyl CoA was observed which could serve as a driving force towards synthesis of guaiacyl lignin. The secondary xylem-specific expression of CCoAOMT was demonstrated using RNA blot analysis, western blot analysis, and O-methyltransferase enzyme assays. In addition, Southern blot analysis indicated that CCoAOMT may exist as a single-copy gene in loblolly pine genome. The transgenic tobacco plants carrying loblolly pine CCoAOMT ***promoter*** -GUS fusion localized the site of GUS activity at the secondary xylem tissues. These data suggest that CCoAOMT, in addition to AEOMT, plays an important role in the methylation pathway associated with lignin biosynthesis in loblolly pine.

L8 ANSWER 15 OF 20 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 1999:455251 BIOSIS <<LOGINID::20061117>>
DN PREV199900455251
TI Secondary xylem-specific expression of caffeoyl-coenzyme A 3-O-methyltransferase plays an important role in the methylation pathway associated with lignin biosynthesis in loblolly pine.
AU Li, Laigeng; Osakabe, Yuriko; Joshi, Chandrashekhar P. [Reprint author]; Chiang, Vincent L.
CS Plant Biotechnology Research Center, School of Forestry and Wood Products, Michigan Technological University, Houghton, MI, 49931, USA
SO Plant Molecular Biology, (July, 1999) Vol. 40, No. 4, pp. 555-565. print.
CODEN: PMBIDB. ISSN: 0167-4412.
DT Article
LA English
OS Genbank-AF098159; EMBL-AF098159; DDBJ-AF098159; Genbank-AF036095;
EMBL-AF036095; DDBJ-AF036095
ED Entered STN: 1 Nov 1999
Last Updated on STN: 3 May 2000
AB Two types of structurally distinct O-methyltransferases mediate the methylation of hydroxylated monomeric lignin precursors in angiosperms. Caffeate 3-O-methyltransferase (***COMT*** ; EC 2.1.1.68) methylates the free acids and caffeoyl CoA 3-O-methyltransferase (CCoAOMT; EC 2.1.1.104) methylates coenzyme A esters. Recently, we reported a novel hydroxycinnamic acid/hydroxycinnamoyl CoA ester O-methyltransferase (AEOMT) from loblolly pine differentiating xylem that was capable of methylating both acid and ester precursors with similar efficiency. In order to determine the possible existence and role of CCoAOMT in lignin biosynthesis in gymnosperms, a 1.3 kb CCoAOMT cDNA was isolated from loblolly pine that showed 79-82% amino acid sequence identity with many angiosperm CCoAOMTs. The recombinant CCoAOMT expressed in Escherichia coli exhibited a significant methylating activity with hydroxycinnamoyl CoA esters whereas activity with hydroxycinnamic acids was insignificant. Moreover, 3.2 times higher catalytic efficiency for methylating caffeoyl CoA over 5-hydroxyferuloyl CoA was observed which could serve as a driving force towards synthesis of guaiacyl lignin. The secondary xylem-specific expression of CCoAOMT was demonstrated using RNA blot analysis, western blot analysis, and O-methyltransferase enzyme assays. In addition, Southern blot analysis indicated that CCoAOMT may exist as a single-copy gene in loblolly pine genome. The transgenic tobacco plants carrying loblolly pine CCoAOMT ***promoter*** -GUS fusion localized the site of GUS activity at the secondary xylem tissues. These data suggest that CCoAOMT, in addition to AEOMT, plays an important role in the methylation pathway associated with lignin biosynthesis in loblolly pine.

L8 ANSWER 16 OF 20 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 1999:396468 BIOSIS <<LOGINID::20061117>>
DN PREV199900396468
TI Expression of bifunctional caffeoyl-CoA 3-O-methyltransferase in stress compensation and lignification.
AU Grimmig, B.; Kneusel, R. E.; Junghanns, K. T.; Matern, U. [Reprint author]
CS Institut fuer Pharmazeutische Biologie, Philipps-Universitaet Marburg, Deutschhausstrasse 17 A, D-35032, Marburg, Germany
SO Plant Biology (Stuttgart), (May, 1999) Vol. 1, No. 3, pp. 299-310. print. ISSN: 1435-8603.
DT Article
LA English
ED Entered STN: 8 Oct 1999
Last Updated on STN: 8 Oct 1999
AB Caffeate and caffeoyl-CoA O-methyltransferases (COMTs and CCoAOMTs) catalyze the formation of ferulic acid and feruloyl-CoA, respectively, in many plants, and their physiological significance is under investigation. CCoAOMT was proposed to play a pivotal role in cell wall reinforcement during the induced disease resistance response, as exemplified in elicitor-treated parsley cells, as well as in the formation of guaiacyl- and syringyl-type lignins. This requires selective substrate and tissue specificities. Parsley CCoAOMT expressed in E. coli methylated caffeoyl- or 5-hydroxyferuloyl-CoA to feruloyl- and sinapoyl-CoA, whereas neither caffeate nor 5-hydroxyferulate was accepted. Tissue print hybridizations of parsley stem and root sections revealed, furthermore, that CCoAOMT mRNA is constitutively associated with the ***vascular*** tissues, but is also expressed in the surface cell layers upon wounding. In order to study the ***promoter*** activity of the parsley CCoAOMT gene, tobacco plantlets were transformed with parsley CCoAOMT ***promoter*** -GUS reporter gene constructs; these transformants, at the very young stage, expressed GUS activity in a narrow subapical root zone only extending later to the ***vascular*** tissue at the onset of xylem differentiation. GUS activity of the mature transgenic tobacco plants was observed exclusively in the parenchyma lining the differentiated xylem elements and xylem ray cells of root, stem or leaf tissues. Thus, parsley CCoAOMT is a bifunctional enzyme which appears to serve in both stress compensation and lignification. This was supported by the ontogenetic activity profile of tobacco endogeneous CCoAOMT, which correlated closely with the GUS expression under the control of parsley CCoAOMT ***promoter*** , while the proportion of CCoAOMT vs. ***COMT*** activities varied substantially during growth of the transgenic tobacco plants.

L8 ANSWER 17 OF 20 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 2003:144035 BIOSIS <<LOGINID::20061117>>
DN PREV200300144035
TI Understanding lignin biosynthesis to improve wood quality in poplar.
AU Chen, Cuiying [Reprint Author]; Meyermans, Hugo [Reprint Author]; Christensen, Jorgen H. [Reprint Author]; Moreel, Kris [Reprint Author]; Baucher, Marie [Reprint Author]; Van, Jan [Reprint Author]; Messens, Eric [Reprint Author]; Van, Marc [Reprint Author]; Boerjan, Wout [Reprint Author]; Lapierre, Catherine; Leple, Jean-Charles; Petit-Conil, Michel
CS Departement Genetica, University of Ghent, VIB, Ghent, Belgium cuche@gengenp.rug.ac.be
SO Plant Biology (Rockville), (1999) Vol. 1999, pp. 65. print. Meeting Info.: Annual Meeting of the American Society of Plant Physiologists. Baltimore, Maryland, USA. July 24-28, 1999. American Society of Plant Physiologists (ASPP).
DT Conference; (Meeting) Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 19 Mar 2003
Last Updated on STN: 19 Mar 2003

L8 ANSWER 18 OF 20 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 1996:462557 BIOSIS <<LOGINID::20061117>>
DN PREV199699184913
TI The maize ***caffeic*** ***acid*** ***O*** - ***methyltransferase*** gene ***promoter*** is active in transgenic tobacco and maize plant tissues.
AU Capellades, Montserrat; Torres, Miguel Angel; Bastisch, Ingo; Stiefel, Virginia; Vignols, Florence; Bruce, Wesley B.; Peterson, David; Puigdomenech, Pere; Rigau, Joan [Reprint author]
CS Dep. de Genetica Molecular, CID-CSIC, Jordi Girona 18-26, 08034-Barcelona, Spain
SO Plant Molecular Biology, (1996) Vol. 31, No. 2, pp. 307-322. CODEN: PMBIDB. ISSN: 0167-4412.
DT Article
LA English
ED Entered STN: 11 Oct 1996
Last Updated on STN: 5 Nov 1996
AB The pattern of expression directed by the ***promoter*** of the maize ***caffeic*** ***acid*** ***O*** - ***methyltransferase*** (***COMT***) gene was studied by histochemical and fluorometric beta-glucuronidase (GUS) analysis in transgenic maize and tobacco plants. The ***COMT*** ***promoter*** directs GUS expression to the xylem and the other tissues undergoing lignification, and it responds to wounding and to elicitors. In transgenic maize plants, expression of GUS corresponds to the pattern of expression of the endogenous ***COMT*** gene as determined by northern analysis and in situ hybridization. The pattern in transgenic tobacco plants clearly shows that the maize ***promoter*** sequence is recognized by tobacco transcriptional factors, in spite of the anatomical differences and the evolutionary distance between these two species. The results suggest that the most significant ***promoter*** signals that induce the specific expression of the lignin ***COMT*** are conserved in different species.

L8 ANSWER 19 OF 20 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 1996:508866 BIOSIS <<LOGINID::20061117>>
DN PREV199699231222
TI Analysis of promoters active in specific cell types in the radicular system of Zea mays.
AU Capellades, Montserrat; Torres, Miguel Angel; Uribe, Xavier; Vignols, Florence; Rigau, Joan; Puigdomenech, Pere
CS Molecular Genetic Dep., CID-CSIC, Jordi Girona, 18. 08034 Barcelona, Spain
SO Biotecnologia Aplicada, (1996) Vol. 13, No. 2, pp. 126. ISSN: 0864-4551.
DT Article
LA English
ED Entered STN: 14 Nov 1996
Last Updated on STN: 10 Dec 1996

L8 ANSWER 20 OF 20 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 1996:67319 BIOSIS <<LOGINID::20061117>>
DN PREV199698639454
TI A novel lignin in poplar trees with a reduced caffeic acid/5-hydroxyferulic acid O-methyltransferase activity.
AU Van Doorsselaere, Jan; Baucher, Marie; Chognot, Emmanuelle; Chabbert, Brigitte; Tollier, Marie-Therese; Petit-Conil, Michel; Leple, Jean-Charles; Pilate, Gilles; Cornu, Daniel; Monties, Bernard; Van Montagu, Marc [Reprint author]; Inze, Dirk; Boerjan, Wout; Jouanin, Lise
CS Lab. Genetica, Univ. Gent, K.L. Ledeganckstr. 35, B-9000 Gent, Belgium
SO Plant Journal, (1995) Vol. 8, No. 6, pp. 855-864. ISSN: 0960-7412.
DT Article
LA English
ED Entered STN: 9 Feb 1996
Last Updated on STN: 13 Mar 1996
AB Lignin is a polymeric constituent of the cell wall that needs to be removed during the paper making process. Bispecific caffeic acid/5-hydroxyferulic acid O-methyltransferase (***COMT***) catalyses the O-methylation of caffeic acid and 5-hydroxyferulic acid to ferulic acid and sinapic acid, respectively. These compounds are intermediates in the biosynthesis of the lignin precursors. Therefore, COMTs are potential target enzymes for reducing the amount, or modifying the composition, of lignin in plants. Different antisense and sense constructs have been expressed of a gene encoding a ***COMT*** from poplar (Populus trichocarpa times P. deltoides) in a P. tremula times P. alba clone under the control of the cauliflower mosaic virus 35S ***promoter*** . From all analysed transformants, four lines transformed with an antisense construct had a reduced ***COMT*** activity. Two showed a 50% reduction of ***COMT*** activity, which altered only slightly the monomeric composition. In the two other transformants, the ***COMT*** activity was reduced by 95%. In the latter case, the syringyl/guaiacyl ratio (S/G) was reduced by sixfold (due to a decrease of S and an increase of G), as analysed by thioacidolysis. A new component of lignin, the 5-hydroxyguaiacyl residue, was detected among the thioacidolysis products. Moreover, in contrast to the white/yellow colour of wild-type wood, the xylem of the transgenic lines with a 95% reduction of ***COMT*** activity was pale rose. A similar phenotype was observed in brown-midrib mutants of maize and sorghum, known for their altered lignification. Although the lignin composition was consistently modified, the lignin content of the transgenic poplars was similar to that of the controls.

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TOTAL
                                ENTRY   SESSION
CA SUBSCRIBER PRICE                      0.00    -15.75

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TOTAL
                                ENTRY   SESSION
CA SUBSCRIBER PRICE                      0.00    -15.75

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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Nov 10, 2006 (20061110/UP).

=> FIL EMBASE BIOSIS CAPLUS
COST IN U.S. DOLLARS                    SINCE FILE      TOTAL
                                ENTRY   SESSION
FULL ESTIMATED COST                      0.06    191.43

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)      SINCE FILE
TOTAL
                                ENTRY   SESSION
CA SUBSCRIBER PRICE                      0.00    -15.75

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    FILE 'EMBASE, BIOSIS, CAPLUS' ENTERED AT 15:10:57 ON 17 NOV 2006
L1          6 S EUCALYPTUS GRANDIS AND (CAFFEIC ACID O-
METHYLTRANSFERASE OR C
L2          6 DUP REM L1 (0 DUPLICATES REMOVED)
L3       5371 S CAFFEIC ACID O METHYLTRANSFERASE OR COMT
L4        204 S L3 AND PROMOTER
L5         59 S L4 AND PY<=2000
L6         32 DUP REM L5 (27 DUPLICATES REMOVED)
L7         22 S L4 AND VASCULA?
L8         20 DUP REM L7 (2 DUPLICATES REMOVED)

    FILE 'STNGUIDE' ENTERED AT 15:19:47 ON 17 NOV 2006

    FILE 'STNGUIDE' ENTERED AT 15:29:38 ON 17 NOV 2006

    FILE 'STNGUIDE' ENTERED AT 15:29:40 ON 17 NOV 2006

    FILE 'EMBASE, BIOSIS, CAPLUS' ENTERED AT 15:29:47 ON 17 NOV 2006

=> s Eucalyptus grandis
L9       1553 EUCALYPTUS GRANDIS

=> s l9 and review
L10        15 L9 AND REVIEW

=> dup rem l10
PROCESSING COMPLETED FOR L10
L11        15 DUP REM L10 (0 DUPLICATES REMOVED)

=> d bib abs 1-
YOU HAVE REQUESTED DATA FROM 15 ANSWERS - CONTINUE? Y/(N):y
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L11 ANSWER 1 OF 15 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 2006:446669 BIOSIS <<LOGINID::20061117>>
DN PREV200600453454
TI Progress in research on forest tree genomics.
AU Gan Si-Ming [Reprint Author]; Su Xiao-Hua
CS Chinese Acad Forestry, Res Inst Trop Forestry, Guangzhou 510520, Peoples R
China
smggan@pub.guangzhou.gd.cn
SO Zhiwu Shengli yu Fenzi Shengwuxue Xuebao, (APR 2006) Vol. 32, No. 2, pp. 133-142.
ISSN: 1671-3877.
DT Article
General Review; (Literature Review)
LA Chinese
ED Entered STN: 13 Sep 2006
Last Updated on STN: 13 Sep 2006
AB This is a ***review*** on forest tree genomics. In structural genomics, genetic maps have been constructed for up to 40 forest tree species, more than 30 commercially important QTLs have been detected, comparative mapping has been done for a few of forest tree taxa, and whole genome sequencing was completed for Populus and is under way for Eucalyptus. For functional genomics, huge EST databases from multiple tissues of a number of tree species have been rapidly accumulated, and molecular analyses on secondary growth and wood formation, flowering, and cold hardiness have given some insights into the metabolic pathways of those tree-specific development processes. The prospects of development in tree genomics are discussed, which may be implicative for accelerating forest tree genomics studies in China.

L11 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2006:95751 CAPLUS <<LOGINID::20061117>>
DN 145:398376
TI Conducting polymers and their blends
AU Gomes, M. A. B.; Micaroni, L.
CS Centro de Pesquisa em Quimica Aplicada, Laboratorio de Polimeros Condutores, Departamento de Quimica, Universidade Federal do Parana, Curitiba, CEP 81531-990, Brazil
SO Metals, Materials and Processes (2005), 17(3-4), 207-218
CODEN: MEMPEX; ISSN: 0970-423X
PB Meshap Science Publishers
DT Journal; General Review
LA English
AB A ***review*** . The research in conducting polymers in the Chem. Department of UFPR began about ten years ago. The electrochem. synthesis of the poly-o-toluidine, polydiphenylamine, polypyrrole, poly(o-aminophenol) and polythiophene derivs., like as poly(3-methylthiophene), poly(3-hexylthiophene) and poly(3-octylthiophene) was carried out to obtain thin films on platinum and conductor glass. On the poly-o-toluidine and polydiphenylamine films was deposited copper. The nucleation process was studied by cronoamperometry and the copper deposits characterized by SEM. The films of polypyrrole and polythiophene derivs. was electrochem. deposited on conductor glass and the ionization potential (IP) was detd. by cyclic voltammetry measurements. This parameter was used to construct the energy level diagrams of the polymers. Based on the difference of the energy level diagrams of polypyrrole (PPy) and poly(3-methylthiophene) (PMeT), bilayers composed by these polymers have been synthesized by galvanostatic method. The effect of polymn. sequence on the morphol., electrochem. and photoelectrochem. properties of PPy/PMeT bilayers, have been studied. Polyaniline (Pani) base synthesized chem. was used in blend film with ***Eucalyptus*** ***grandis*** Kraft lignin (Lig) and polyvinylchloride (PVC). The first blend was characterized by cyclic voltammetry, FTIR spectroscopy, XPS and thermal anal. Thin films of Pani/PVC blend was analyzed by cyclic voltammetry.
RE.CNT 72 THERE ARE 72 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:70229 CAPLUS <<LOGINID::20061117>>
DN 141:227067
TI Development of environmental-stress tolerant eucalyptus and forest plantations
AU Kawazu, Tetsu
CS Forestry Res. Inst., Oji Paper Co. Ltd., Japan
SO Kami Pa Gikyoshi (2004), 58(1), 55-61
CODEN: KAGIAU; ISSN: 0022-815X
PB Kami Parupu Gijutsu Kyokai
DT Journal; General Review
LA Japanese
AB A ***review*** . Environmental problems in the earth scale have become serious by a variety of industries and economic activities of human race. The activity of paper industry is one of main factors in the decrease of forest. The wood raw material securing is a big problem esp. in Japan where forest resource is scarce. As a soln. of this problem, paper industry pos. executes afforestation in various regions around the world for stable securing of the raw material. For the further improvement of productivity and pulp properties in eucalypts, Oji Paper Co. is doing forest tree breeding research. Improvement of their growth under stress environment would be most important targets of mol. breeding to increase productivity. We introduced the transcription factor DREB 1 A gene that induces expression of some stress tolerance genes, and a mitochondrial

citrate synthase gene that was related to acquiring phosphate under aluminum-induced inorg. phosphate limited conditions. Our recent results suggest the possibility that we can give tolerance of drought and acid soil to hybrid eucalypts (***Eucalyptus*** ***grandis*** x urophylla) by this approach.

L11 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:387596 CAPLUS <<LOGINID::20061117>>
DN 141:100503
TI Expressed sequence tag databases from forestry tree species
AU Strabala, Timothy J.
CS Genesis Research and Development Corporation, Ltd., Auckland, N. Z.
SO Molecular Genetics and Breeding of Forest Trees (2004), 19-51. Editor(s): Kumar, Sandeep; Fladung, Matthias. Publisher: Haworth Press, Binghamton, N. Y.
CODEN: 69FJMX; ISBN: 1-56022-959-4
DT Conference; General Review
LA English
AB A ***review*** on results from 4 published EST sequencing projects and from ongoing EST projects. EST sequencing in Pinus, Populus, Cryptomeria japonica, and ***Eucalyptus*** ***grandis*** are discussed.
RE.CNT 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:673713 CAPLUS <<LOGINID::20061117>>
DN 142:389063
TI Chemical studies on growth regulators from plants in semi-arid regions
AU Yoneyama, Koichi
CS Center for Research on Wild Plants, Utsunomiya University, Japan
SO Shokubutsu no Seicho Chosetsu (2004), 39(1), 10-16
CODEN: SSCHCJ; ISSN: 1346-5406
PB Shokubutsu Kagaku Chosetsu Gakkai
DT Journal; General Review
LA Japanese
AB A ***review*** on inhibitors to germination and photosynthetic electron transport of ***Eucalyptus*** ***grandis*** , germination-stimulating substances (strigol, strigolactone, orobanchol, alectrol, etc.) of Striga and Orobanche, etc.

L11 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2000:240554 CAPLUS <<LOGINID::20061117>>
DN 132:309849
TI Biotechnology in dissolving pulp manufacture
AU Christov, Lew
CS Sappi Management Services: R&D Sappi Biotechnology Laboratory Dept. of Microbiology and Biochemistry, University of the Orange Free State, Bloemfontein, 9300, S. Afr.
SO TAPPI Pulping Conference, Orlando, Fla., Oct. 31-Nov. 4, 1999 (1999), Volume 2, 653-660 Publisher: TAPPI Press, Atlanta, Ga.
CODEN: 68UHAF
DT Conference; General Review
LA English
AB A ***review*** with 35 refs. is presented giving an overview of recent research achievements in the field of use of biol. methods in acid sulfite dissolving pulp manuf. Extensive research work on effluent bio-remediation, bio-pulping, and bio-bleaching of dissolving pulp was conducted. The aim was to develop a modern biotechnol. which could aid the existing chem. processes in a cost-effective and environmentally friendly way. Bio-sulfite pulping of ***Eucalyptus*** ***grandis*** with selected strains of the white rot fungus Ceriporiopsis subvermispora was shown to improve the selectivity of both pulping and bleaching of dissolving pulp. The use of xylanase (I) in dissolving pulp bleaching was favorable in terms of boosting the final brightness. The brightness gain could be translated into savings of ClO3, which in turn would decrease the AOX and chloride content of bleach plant effluents. The enzymic degrdn. and removal of hemicellulose from dissolving pulp decreased the levels of alkali soly. S18 and S10. Pulping and bleaching effluents were studied for their usability to serve as inexpensive inducers and C source in microbial prodn. of I. Bio-remediation studies with selected fungi led to isolation of a Rhizomucor pusillus strain capable of decolorizing rapidly the bleach plant effluent. It was demonstrated that the fungal bio-treatment of effluent could result in significant decreases of AOX, toxicity, and COD.
RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2000:300034 CAPLUS <<LOGINID::20061117>>
DN 133:18946
TI Mechanical pulping of hardwood and its applications
AU Ognar, Guenther; Xu, Eric Chao
CS Andritz AG, Vienna, A-1121, Austria
SO Emerging Technologies of Pulping & Papermaking of Fast-Growing Wood, Proceedings of the International Symposium on Emerging Technologies of Pulping & Papermaking of Fast-Growing Wood, Guangzhou, Nov. 23-25, 1998 (1998), 225-234. Editor(s): Liu, Huanbin; Zhan, Huaiyu; Xie, Yimin. Publisher: South China University of Technology Press, Canton, Peop. Rep. China.
CODEN: 68YBAH
DT Conference; General Review
LA English
AB A ***review*** with 12 refs. on different high-yield mech. pulping technols., i.e., alk. peroxide mech. pulping (APMP), chemithermomech. pulping (CTMP), cold caustic soda (CCS), and post-bleaching, is presented, comparing them in terms of overall performance on mill operation and pulp property development. APMP technol. is recommended for applications where a high brightness is required for the pulp application. APMP pulps from ***Eucalyptus*** ***grandis*** from several South American countries and a no. of Brazilian Eucalyptus species are compared in terms of pulp property development, and their potential applications in the paper and paperboard industry.
RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1998:390893 CAPLUS <<LOGINID::20061117>>
DN 129:173017
TI Realized operational gains from clonal eucalypt forestry in Colombia and current methods to increase them
AU Wright, J. A.
CS Wright Forest Management Consultants Incorporated, Cary, NC, 27511, USA
SO Biological Sciences Symposium, San Francisco, Oct. 19-23, 1997 (1997), 203-205 Publisher: TAPPI Press, Atlanta, Ga.
CODEN: 66GVA7
DT Conference; General Review
LA English
AB A ***review*** with 11 refs. Plantation yields from ***Eucalyptus*** ***grandis*** plantations at Smurfit Carton de Colombia in 1990 were 100 tons of wood per ha over a ten year rotation for a mean annual increment (MAI) of 10 tons/ha/yr. Current operational yields from clonal plantation of E. grandis and the hybrid urograndis are 210 tons of wood per ha over a six year rotation for a MAI of 35 tons/ha/yr. This increase has been due to matching clones to site, correct weed control, fertilization at planting and selection of those clones resistant to disease. Operational gains have been reduced wood cost, lower harvesting cost due to higher stocking and more uniform piece size and increased wood uniformity. Current methods to increase these yields include refertilization, use of control cross seed for prodn. of new material for clonal selection, hybridization, seed and clone exchange, DNA fingerprinting, tissue culture, gene transformation for reduced lignin prodn. and silvicultural site prescriptions including no burning to protect existing soil mycorrhiza and nutrients. It is anticipated to double the pulp yield per ha per yr from present levels.
RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 9 OF 15 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 1996:315775 BIOSIS <<LOGINID::20061117>>
DN PREV199699038131
TI ***Review*** of WURC stockpiling and sawmilling studies.
AU Siemon, G. R.
CS Sci. Information Div., Dep. Conservation Land Management, PO Box 104, Como
6152, WA, Australia
SO CALMScience, (1995) Vol. 2, No. 1, pp. 101-110.
ISSN: 1320-145X.
DT Article
General Review; (Literature Review)
LA English
ED Entered STN: 11 Jul 1996
Last Updated on STN: 11 Jul 1996
AB The stockpiling and sawmilling research trials carried out since 1986 at the Wood Utilisation Research Centre of the Western Australian Department of Conservation and Land Management are reviewed in this report. The major species assessed were jarrah (Eucalyptus marginata Donn. ex Sm.) and karri (E. diversicolor F. Muell.). Other species assessed were marri (E. calophylla R. Br. ex Lindl.), and six species growing in the eastern Goldfields area: Dundas blackbutt (E. dundasii Maiden), York gum (E. loxophleba Benth.), gimlet (E. salubris F. Muell.), redwood (E. transcontinentalis Maiden), mulga (Acacia aneura F. Muell. ex Benth.), and northern cypress pine (Callitris columellaris F. Muell. sens. lat.). Western Australian grown Tasmanian blue gum (E. globulus Labill. ssp. globulus), and rose gum (E. grandis W. Hill ex Maiden) were also assessed, as well as karri, red mahogany (E. resinifera Sm.), spotted gum (E. maculata Hook.) and tallowwood (E. microcorys F. Muell.) grown on rehabilitated bauxite minesites. The stockpiling trials indicated that storing logs under a water spray schedule of 15 min in every 3 hours gave acceptable log quality with a 93 per cent saving in power and water. The sawmilling trials indicated the potential for processing small regrowth eucalypts into structural or appearance grade timber products, and the results confirmed the close correlation between log size and sawn recoveries. The comparatively high incidence of defects, e.g. knots, borer damage, rot, bow and spring reduced graded recoveries in all species.

L11 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1995:698488 CAPLUS <<LOGINID::20061117>>
DN 123:191047
TI Plant regulators in extract of eucalyptus
AU Yoshida, Shigeo

CS Inst. Phys. Chem. Res., Wako, 351-01, Japan
SO Aromatopia (1995), 11(6), 40-1
CODEN: AROMFS; ISSN: 0918-4295
PB Fureguransu Janarusha
DT Journal; General Review
LA Japanese
AB A ***review*** with 7 refs. of the author's studies on the title subject, including the rooting inhibitor from ***Eucalyptus*** ***grandis*** , germination inhibitors from eucalyptus, and their application.

L11 ANSWER 11 OF 15 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 1990:427171 BIOSIS <<LOGINID::20061117>>
DN PREV199090087972; BA90:87972
TI A SURVEY OF ZELOTYPIA-STACYI SCOTT 1869 LEPIDOPTERA HEPIALIDAE 1864-1985.
AU CHADWICK C E [Reprint author]
CS C/O AUSTRALIAN MUS, 6-8 COLLEGE ST, SYDNEY, NSW, AUST
SO Giornale Italiano di Entomologia, (1989) Vol. 4, No. 21, pp. 191-198. ISSN: 0392-7296.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 22 Sep 1990
Last Updated on STN: 22 Sep 1990
AB A ***review*** is made of significant literature relating to Zelotypia stacyi Scott since the first record of its discovery, and additional information added. Collecting data indicate that more than half of the specimens were taken in March, and most of the remainder in April. Occasional specimens were collected in December, January and May. Eggs are scattered indiscriminately. Larvae bore into eucalypt branches, where, later on, larvae and pupae are able to move vertically in tunnels in the trunk. Pupation occurs behind a plug of material which is pushed outwards before the emergence of the adult. V.J. Robinson found that the combined larval and pupal period occupied a minimum of four years. Eucalyptus tereticornis is the major host plant, although E. grandis, E. punctata, E. resinifera, E. saligna and the hybrid E. saligna-E. botryoides have been mentioned. Once regarded as restricted to N.S.W., recent data confirm older records of its occurrence in southern Queensland. Natural enemies include the fungus Cordyceps sp. and a species of black cockatoo. The pyralid moth Tirathaba sp. is also associated with Z. stacyi.

L11 ANSWER 12 OF 15 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 1988:286280 BIOSIS <<LOGINID::20061117>>
DN PREV198886014547; BA86:14547
TI AN ANALYTICAL ***REVIEW*** OF PRODUCTION RATES AND STEMWOOD BIOMASS OF TROPICAL FOREST PLANTATIONS.
AU LUGO A E [Reprint author]; BROWN S; CHAPMAN J
CS INST TROP FOR, SOUTH FOREST EXP STN, US DEP AGRIC FOREST SERV, CALL BOX 25000, RIO PIEDRAS 00928 2500, PR, USA
SO Forest Ecology and Management, (1988) Vol. 23, No. 2-3, pp. 179-200. CODEN: FECMDW. ISSN: 0378-1127.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 16 Jun 1988
Last Updated on STN: 16 Jun 1988
AB Data on stemwood biomass and mean annual biomass increment (MABI) for seven tropical tree plantation species were synthesized from the literature to evaluate species adaptability and potential yields in different environments. Stemwood biomass ranged from < 1 to 71 t ha-1, and MABI ranged from about 1 t 30 t ha-1 in plantations of Pinus caribaea, Tectona grandis, Pinus patula, Gmelina arborea, Cupressus lusitanica, ***Eucalyptus*** ***grandis*** , and Albizia falcataria. Stemwood biomass and MABI varied with species, plantation age, and climate. Linear models best described the relationship between stemwood biomass and age of plantation, and the slopes of these equations (MABIs) varied among species and among life zones for a given species. Significant relations were found between stemwood biomass and MABI and water availability (the ratio of temperature to precipitation, T/P). In general, stemwood biomass and MABI decreased at high (arid) and low (very humid) T/P ratios. Each tree species had an optima T/P at which its maximum stemwood biomass and MABI occurred. Other site factors, such as soil fertility, modified plantation response to climate.

L11 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1987:595135 CAPLUS <<LOGINID::20061117>>
DN 107:195135
TI Frost hardiness in ***Eucalyptus*** ***grandis*** : a possible molecular mechanism
AU Bolte, Matthew L.; Crow, Wilfrid D.; Paton, Dugald M.
CS Aust. Natl. Univ., Canberra, 2601, Australia
SO Plant Biology (New York) (1987), 5(Plant Cold Hardiness), 129-39
CODEN: PBIOEM; ISSN: 0894-4563
DT Journal; General Review
LA English
AB Plant growth substances (G) derived from acylphloroglucinols have been shown to undergo diurnal fluctuation in E. grandis. The main G-regulator, G3, is high in the night, but falls during the daylight hours, while its precursor, G4, follows the opposite course. The conversion of G4 to G3 can be demonstrated in vitro and is also implied in vivo by isotopic labeling techniques. G3 can be shown in vitro to react with amines to form Mannich bases (believed to be the form in which these substances are stored in the plant) that react with thiols to give the disulfides. Thus, aminothiols such as cysteine will react directly with G3 itself to form cystine, and the mechanism of this reaction is discussed. The role of glutathione as a thiol-disulfide mediator and its possible reaction with the plant growth regulators are discussed in relation to Levitt's theories of disulfide bond formation during frost damage in plants.

L11 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1987:595134 CAPLUS <<LOGINID::20061117>>
DN 107:195134
TI Frost resistance in Eucalyptus: are plant growth regulators involved?
AU Paton, Dugald M.
CS Dep. For., Aust. Natl. Univ., Canberra, 2600, Australia
SO Plant Biology (New York) (1987), 5(Plant Cold Hardiness), 117-27
CODEN: PBIOEM; ISSN: 0894-4563
DT Journal; General Review
LA English
AB Changes in level of the growth regulator (G) present in ***Eucalyptus*** ***grandis*** were followed during the year, and during day-night cycles in winter. Endogenous G content is relatively low in summer but increases to 5-6 mg/g fresh wt. in winter. The appreciable low temp. hardening that occurs within hours during a winter night is assocd. with an approx. 2-fold increase in G content. As this increase in G is balanced by a corresponding decrease during the 1st few hours after dawn on a sunny winter morning, the winter G content involves a marked diurnal variation. Such rapid diurnal changes in G content suggest that G plays the role of executive mol. in the hardening and dehardening processes in this species. G is closely assocd. with hormonal control of the rooting of stem cuttings and with ABA in transpiration. Indeed, the ranking of eucalypt species for frost susceptibility is very similar to their ranking for rooting capacity. Frost resistance mechanisms in eucalypts are thus likely to involve both growth regulators and plant hormones although the mol. basis will differ for those species in which the major growth regulators are other than G.

L11 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1979:51345 CAPLUS <<LOGINID::20061117>>
DN 90:51345
TI Root formation and physiologically active substances
AU Ohsawa, Tohihiko
CS Nagoya Univ., Nagoya, Japan
SO Kagaku to Seibutsu (1978), 16(10), 644-5
CODEN: KASEAA; ISSN: 0453-073X
DT Journal; General Review
LA Japanese
AB A ***review*** with 7 refs. describing the structures and physiol. activity of rooting cofactors obtained from Chrysanthemum morifolium such as chrysartemin A, chrysartemin B, and chlorochrymorin and root inhibitors from ***Eucalyptus*** ***grandis*** such as the 3 G inhibitors and grandinol.

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(FILE 'HOME' ENTERED AT 15:10:54 ON 17 NOV 2006)

FILE 'EMBASE, BIOSIS, CAPLUS' ENTERED AT 15:10:57 ON 17 NOV 2006
L1 6 S EUCALYPTUS GRANDIS AND (CAFFEIC ACID O METHYLTRANSFERASE OR C
L2 6 DUP REM L1 (0 DUPLICATES REMOVED)
L3 5371 S CAFFEIC ACID O METHYLTRANSFERASE OR COMT
L4 204 S L3 AND PROMOTER
L5 59 S L4 AND PY<=2000
L6 32 DUP REM L5 (27 DUPLICATES REMOVED)
L7 22 S L4 AND VASCULA?
L8 20 DUP REM L7 (2 DUPLICATES REMOVED)

FILE 'STNGUIDE' ENTERED AT 15:19:47 ON 17 NOV 2006

FILE 'STNGUIDE' ENTERED AT 15:29:38 ON 17 NOV 2006

FILE 'STNGUIDE' ENTERED AT 15:29:40 ON 17 NOV 2006

FILE 'EMBASE, BIOSIS, CAPLUS' ENTERED AT 15:29:47 ON 17 NOV 2006
L9 1553 S EUCALYPTUS GRANDIS
L10 15 S L9 AND REVIEW
L11 15 DUP REM L10 (0 DUPLICATES REMOVED)

=> s l9 and vascula?
L12 938 L9 AND VASCULA?

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L13 2 L12 AND COMT

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PROCESSING COMPLETED FOR L13

L14 2 DUP REM L13 (0 DUPLICATES REMOVED)

=> d bib abs 1-
YOU HAVE REQUESTED DATA FROM 2 ANSWERS - CONTINUE? Y/(N):y

L14 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:98977 CAPLUS <<LOGINID::20061117>>
DN 142:192341
TI ***Eucalyptus*** ***grandis*** caffeic acid O-methyltransferase gene promoter and methods for the modification of gene expression in ***vascular*** tissue
IN Perera, Ranjan; Rice, Stephen James; Eagleton, Clare Katherine
PA Genesis Research and Development Corporation Limited, N. Z.; Rubicon Forests Holdings Limited
SO U.S. Pat. Appl. Publ., 82 pp., Cont.-in-part of U.S. Ser. No. 291,447.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 8

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2005026162	A1	20050203	US 2003-702319	20031106
US 6380459	B1	20020430	US 1999-276599	19990325
WO 2000058474	A1	20001005	WO 2000-NZ18	20000224
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6596925	B1	20030722	US 2000-598401	20000620
ZA 2001007442	A	20020312	ZA 2001-7442	20010910
US 2003101478	A1	20030529	US 2002-137036	20020430
US 2003091981	A1	20030515	US 2002-291447	20021108
PRAI US 1999-276599	A2	19990325		
US 1999-146591P	P	19990730		
WO 2000-NZ18	A2	20000224		
US 2000-598401	A2	20000620		
US 2000-724624	B2	20001128		
US 2001-345397P	P	20011109		
US 2002-137036	A2	20020430		
US 2002-291447	A2	20021108		
US 2002-425087P	P	20021108		
WO 2001-NZ115	W	20010620		

AB The invention claims ***vascular*** tissue-specific plant polynucleotide promoter sequences and genetic constructs comprising such polynucleotides. Specifically, the invention claims sequences for ***Eucalyptus*** ***grandis*** ***cOMT*** (caffeic acid O-methyltransferase) gene promoter, which is involved in lignin biosynthesis. The invention further claims methods for using such constructs in modulating the transcription of DNA sequences of interest, together with transgenic plants comprising such constructs. Eucalyptus gene ***cOMT*** promoter activity was demonstrated in transfected Zinnia elegans mesophyll cells using the GUS reporter gene. ***Vascular*** tissue-specific expression of the promoter was shown in transgenic Nicotiana benthamiana using an OMT promoter-GUS construct.

L14 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:612477 CAPLUS <<LOGINID::20061117>>
DN 141:135240
TI Sequences of ***vascular*** -preferred promoter sequences and use in woody plants
IN Phillips, Jonathan; Eagleton, Clare
PA Arborgen, LLC, USA
SO U.S. Pat. Appl. Publ., 32 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 8

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2004146904	A1	20040729	US 2003-703091	20031107
PRAI US 2002-425087P	P	20021108		

AB The invention provides seven ***vascular*** -preferred promoters from ***Eucalyptus*** ***grandis*** . Methods for using the inventive constructs for regulating gene expression are provided, along with transgenic plants comprising the inventive constructs.

=> s l12 and promoter
L15 12 L12 AND PROMOTER

=> dup rem l15
PROCESSING COMPLETED FOR L15
L16 12 DUP REM L15 (0 DUPLICATES REMOVED)

=> d bib abs 1-
YOU HAVE REQUESTED DATA FROM 12 ANSWERS - CONTINUE? Y/(N):y

L16 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2006:316721 CAPLUS <<LOGINID::20061117>>
DN 144:364129
TI Genetic engineering of plant lignin content
IN Forster, Richard L.; Rottmann, William H.; Connett, Marie B.; Sanders, Paul; Zhang, Gary; Fitzgerald, Sandra Joanne; Eagleton, Clare
PA Arborgen, LLC, USA
SO PCT Int. Appl., 181 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2006036698	A2	20060406	WO 2005-US33824	20050922
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
US 2006101535	A1	20060511	US 2004-946650	20040922
BR 2005006008	A	20060523	BR 2005-6008	20050921
PRAI US 2004-946644	A	20040922		
US 2004-946650	A	20040922		
US 2005-229846	A	20050920		

AB DNA constructs comprising a first DNA segment that corresponds to at least a portion of a gene in the monolignol biosynthetic pathway, a spacer DNA segment, and a second DNA segment that is complementary to the first DNA segment can be used to reduce or modulate the lignin content in plants. In some embodiments, DNA constructs comprise at least a portion of a gene for 4-coumarate-CoA ligase, p-coumarate 3-hydroxylase, cinnamoyl-CoA reductase, cinnamate 4-hydroxylase, coniferyl aldehyde 5-hydroxylase, sinapyl alc. dehydrogenase, or caffeoyl-CoA methyltransferase. ***Vascular*** -preferred and constitutive promoters can be used to drive expression of the constructs.

L16 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2006:579790 CAPLUS <<LOGINID::20061117>>
DN 145:57017
TI Genetic engineering of lignin content and composition in loblolly pine and eucalyptus using genetic constructs targeted to genes of the monolignol biosynthetic pathway
IN Forster, Richard L.; Rottmann, William H.; Connett, Marie B.; Sanders, Paul; Zhang, Gary; Fitzgerald, Sandra Joanne; Eagleton, Clare
PA Arborgen, LLC, N. Z.
SO U.S. Pat. Appl. Publ., 137 pp., Cont.-in-part of U.S. Ser. No. 946,650.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2006130183	A1	20060615	US 2005-229856	20050920
US 2006101535	A1	20060511	US 2004-946650	20040922
BR 2005006008	A	20060523	BR 2005-6008	20050921
PRAI US 2004-946644	A2	20040922		
US 2004-946650	A2	20040922		
US 2005-229846	A	20050920		

AB DNA constructs comprising a first DNA segment that corresponds to at least a portion of a gene in the monolignol biosynthetic pathway, a spacer DNA segment, and a second DNA segment that is complementary to the first DNA segment can be used to reduce or modulate the lignin content in plants. DNA constructs comprise at a least a sense or antisense portion of a gene for 4-coumarate-CoA ligase (4CL), coumarate 3-hydroxylase, cinnamoyl-CoA reductase, coumarate 4-hydroxylase, coniferyl aldehyde 5-hydroxylase, syringyl alc. dehydrogenase, or caffeoyl-CoA O-methyltransferase in Pinus radiata and ***Eucalyptus*** ***grandis*** . ***Vascular*** -preferred (e.g., 4CL ***promoter*** from Pinus taeda) and constitutive promoters (e.g., superubiquitin ***promoter***) can be used to drive expression of the constructs, and the intron of the YABBY gene of Arabidopsis thaliana can be used as the spacer segment.

L16 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:14539 CAPLUS <<LOGINID::20061117>>
DN 142:110550
TI Genes for sequence homologs of cellulose synthase of Pinus and Eucalyptus for use in altering wood and pulp properties
IN Blocksberg, Leonard N.; Connett-Porceddu, Marie B.; Emerson, Sarah Jane; Frost, Michael J.; Forster, Richard Llewellyn Syndey; Grigor, Murray Robert; Havukkala, Ilikka; Higgins, Collen M.; Kodrzycki, Robert J.; Lund, Steven Troy; Magusin, Andreas
PA Arborgen LLC, USA; Ed Genesis Research and Development Corporation Li
SO PCT Int. Appl., 154 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI WO 2005001051 A2 20050106 WO 2004-US18022 20040607
WO 2005001051 A3 20060622
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
AU 2004252481 A1 20050106 AU 2004-252481 20040607
CA 2528544 AA 20050106 CA 2004-2528544 20040607
EP 1639081 A2 20060329 EP 2004-754589 20040607
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR
BR 2004011028 A 20060725 BR 2004-11028 20040607
PRAI US 2003-476239P P 20030606
WO 2004-US18022 W 20040607
AB Genes for proteins with protein motifs typical of cellulose synthases and glycosyltransferases are identified in Pinus radiata and ***Eucalyptus*** ***grandis*** . These genes may be useful in altering patterns of cellulose synthesis in manipulating wood and pulp properties (no data.). These gene may also be useful in monitoring expression of genes of polysaccharide synthesis in plants.

L16 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:14538 CAPLUS <<LOGINID::20061117>>
DN 142:128727
TI Nucleic acids encoding transcription factors from Eucalyptus grandis and Pinus radiata and their use for plant transformation
IN Bloksberg, Leonard N.; Bryant, Catherine; Connett, Marie B.; Emerson, Sarah Jane; Frost, Michael J.; Forster, Richard Llewellyn Sydney; Grigor, Murray; Higgins, Colleen; Lasham, Annette; Lund, Steven Troy; Magusin, Andreas; Phillips, Jonathan; Puthigae, Sathiah; Veerakone, Stella; Westwood, Clair; Gause, Katrina; Wood, Marion
PA Arborgen, LLC, USA; Ed Genesis Research and Development Corporation Limit
SO PCT Int. Appl., 1265 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1
PATENT NO. KIND DATE APPLICATION NO. DATE
PI WO 2005001050 A2 20050106 WO 2004-US17965 20040607
WO 2005001050 A3 20060629
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
AU 2004252479 A1 20050106 AU 2004-252479 20040607
CA 2528536 AA 20050106 CA 2004-2528536 20040607
EP 1639089 A2 20060329 EP 2004-776335 20040607
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR
BR 2004011002 A 20060523 BR 2004-11002 20040607
CN 1860231 A 20061108 CN 2004-80021820 20040607
PRAI US 2003-476189P P 20030606
WO 2004-US17965 W 20040607
AB The invention provides a large no. of cDNA sequences encoding proteins contg. transcription factor motifs from Eucalyptus grandis and Pinus radiata. Microarray oligonucleotide probes for the polynucleotides are also provided. The nucleic acids may be used to transform plants to regulate gene expression involved in lignin quality and structure, wood compn., plant fiber compn., plant cell division, and plant development.

L16 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:349058 CAPLUS <<LOGINID::20061117>>
DN 142:405603
TI Method to produce para-hydroxybenzoic acid in the stem tissue of green plants by using a tissue-specific ***promoter***
IN Meyer, Knut; Dhugga, Kanwarpal S.
PA USA
SO U.S. Pat. Appl. Publ., 99 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1
PATENT NO. KIND DATE APPLICATION NO. DATE
PI US 2005086712 A1 20050421 US 2003-688745 20031017
AU 2004282594 A1 20050428 AU 2004-282594 20041015
WO 2005038004 A2 20050428 WO 2004-US34342 20041015
WO 2005038004 A3 20060216
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
PRAI US 2003-688745 A 20031017
WO 2004-US34342 W 20041015
AB This invention relates to methods and materials to produce para-hydroxybenzoic acid in the stem tissue of transgenic green plants using a cellulose synthase ***promoter*** to operably express a HCHL gene encoding hydroxycinnamoyl CoA hydratase/lyase. The promoters from Arabidopsis thaliana genes AtCesA4 (IRX5), AtCesA7 (IRX3), and AtCesA8 (IRX1) are suitable tissue specific expression of HCHL. The invention relates to a method to selectively produce para-hydroxybenzoic acid in plant stem tissue comprising: growing a plant contg. a 4-hydroxycinnamoyl-CoA hydratase/lyase expression cassette comprising a tissue-specific ***promoter*** isolated from a cellulose synthase gene encoding a protein involved in the formation of a cellulose synthesis catalytic complex, wherein said cellulose synthesis catalytic complex catalyzes cellulose synthesis in secondary cell wall formation in plant ***vascular*** tissue, and said tissue-specific ***promoter*** operably linked to a nucleic acid mol. encoding a 4-hydroxycinamoyl-CoA hydratase/lyase.

L16 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:98977 CAPLUS <<LOGINID::20061117>>
DN 142:192341
TI ***Eucalyptus*** ***grandis*** caffeic acid O-methyltransferase gene ***promoter*** and methods for the modification of gene expression in ***vascular*** tissue
IN Perera, Ranjan; Rice, Stephen James; Eagleton, Clare Katherine
PA Genesis Research and Development Corporation Limited, N. Z.; Rubicon Forests Holdings Limited
SO U.S. Pat. Appl. Publ., 82 pp., Cont.-in-part of U.S. Ser. No. 291,447.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 8
PATENT NO. KIND DATE APPLICATION NO. DATE
PI US 2005026162 A1 20050203 US 2003-702319 20031106
US 6380459 B1 20020430 US 1999-276599 19990325
WO 2000058474 A1 20001005 WO 2000-NZ18 20000224
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
US 6596925 B1 20030722 US 2000-598401 20000620
ZA 2001007442 A 20020312 ZA 2001-7442 20010910
US 2003101478 A1 20030529 US 2002-137036 20020430
US 2003091981 A1 20030515 US 2002-291447 20021108
PRAI US 1999-276599 A2 19990325
US 1999-146591P P 19990730
WO 2000-NZ18 A2 20000224
US 2000-598401 A2 20000620
US 2000-724624 B2 20001128
US 2001-345397P P 20011109
US 2002-137036 A2 20020430
US 2002-291447 A2 20021108
US 2002-425087P P 20021108
WO 2001-NZ115 W 20010620
AB The invention claims ***vascular*** tissue-specific plant polynucleotide ***promoter*** sequences and genetic constructs comprising such polynucleotides. Specifically, the invention claims sequences for ***Eucalyptus*** ***grandis*** cOMT (caffeic acid O-methyltransferase) gene ***promoter*** , which is involved in lignin biosynthesis. The invention further claims methods for using such constructs in modulating the transcription of DNA sequences of interest, together with transgenic plants comprising such constructs. Eucalyptus gene cOMT ***promoter*** activity was demonstrated in transfected Zinnia elegans mesophyll cells using the GUS reporter gene. ***Vascular*** tissue-specific expression of the ***promoter*** was shown in transgenic Nicotiana benthamiana using an OMT ***promoter*** -GUS construct.

L16 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:468031 CAPLUS <<LOGINID::20061117>>
DN 141:34647
TI ***Vascular*** -preferred promoters from Eucalyptus and Pinus, and regulation of lignin and cellulose biosynthesis, and cell wall development in transgenic plants

IN Phillips, Jonathan; Puthigae, Sathish; Yao, Jialong; Flinn, Barry; Forster, Richard S.; Eagleton, Clare
PA Arborgen, LLC, USA
SO PCT Int. Appl., 90 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2004048595	A2	20040610	WO 2003-US37412	20031121
WO 2004048595	A3	20051222		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003294468	A1	20040618	AU 2003-294468	20031121
US 2004163146	A1	20040819	US 2003-717897	20031121
EP 1576175	A2	20050921	EP 2003-789953	20031121
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
BR 2003016455	A	20060124	BR 2003-16455	20031121
JP 2006515509	T2	20060601	JP 2004-555614	20031121
PRAI US 2002-428287P	P	20021122		
WO 2003-US37412	W	20031121		

AB The present invention relates to the regulation of polynucleotide transcription and/or expression. In particular, this invention relates to regulatory sequences isolated from ***Eucalyptus*** ***grandis*** and Pinus radiata that are capable of conferring ***vascular*** -preferred polynucleotide transcription in plant cells. Constructs and methods for using the inventive regulatory sequences for modifying transcription of endogenous and/or heterologous polynucleotides also are included in the invention. Once a ***promoter*** having an appropriate tissue-specific and developmental pattern of expression is found, this ***promoter*** can be used to regulate a desired characteristic in a transgenic plant. In one embodiment, a xylem-specific ***promoter*** is used to regulate the compn. and content of lignin in a plant. Obtaining wood from transgenic plants with regulated biosynthesis of lignin and cellulose is claimed.

L16 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:612477 CAPLUS <<LOGINID::20061117>>
DN 141:135240
TI Sequences of ***vascular*** -preferred ***promoter*** sequences and use in woody plants
IN Phillips, Jonathan; Eagleton, Clare
PA Arborgen, LLC, USA
SO U.S. Pat. Appl. Publ., 32 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 8

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2004146904	A1	20040729	US 2003-703091	20031107
PRAI US 2002-425087P	P	20021108		

AB The invention provides seven ***vascular*** -preferred promoters from ***Eucalyptus*** ***grandis*** . Methods for using the inventive constructs for regulating gene expression are provided, along with transgenic plants comprising the inventive constructs.

L16 ANSWER 9 OF 12 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 2004:424035 BIOSIS <<LOGINID::20061117>>
DN PREV200400427844
TI EgLFY, the ***Eucalyptus*** ***grandis*** homolog of the Arabidopsis gene LEAFY is expressed in reproductive and vegetative tissues.
AU Dornelas, Marcelo Carnier [Reprint Author]; do Amaral, Weber A. Neves; Rodriguez, Adriana Pinheiro Martinelli
CS Ctr Energia Nucl Agr Lab Biotecnol Vegetal, Univ Sao Paulo, Av Centenario 303, BR-13400970, Piracicaba, SP, Brazil
mcdornel@cena.usp.br
SO Brazilian Journal of Plant Physiology, (May 2004) Vol. 16, No. 2, pp. 105-114. print.
ISSN: 1677-0420 (ISSN print).
DT Article
LA English
ED Entered STN: 3 Nov 2004
Last Updated on STN: 3 Nov 2004
AB The EgLFY gene cloned from ***Eucalyptus*** ***grandis*** has sequence homology to the floral meristem identity gene LEAFY (LFY) from Arabidopsis and FLORICAULA (FLO) from Antirrhinum. EgLFY is preferentially expressed in the developing eucalypt floral organs in a pattern similar to that described previously for the Arabidopsis LFY. In situ hybridization experiments have shown that EgLFY is strongly expressed in the early floral meristem and then successively in the primordia of sepals, petals, stamens and carpels. It is also expressed in the leaf primordia of adult trees. The expression of the EgLFY coding region under control of the Arabidopsis LFY ***promoter*** could complement strong to mutations in transgenic Arabidopsis plants. These data suggest that EgLFY plays a similar role to LFY in flower development and that the basic mechanisms involved in flower initiation and development in Eucalyptus may be similar to those occurring in Arabidopsis.

L16 ANSWER 10 OF 12 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 2003:450800 BIOSIS <<LOGINID::20061117>>
DN PREV200300450800
TI An efficient procedure to stably introduce genes into an economically important pulp tree (Eucalyptus grandisXEucalyptus urophylla).
AU Tournier, Vincent; Grat, Sabine; Marque, Christiane; El Kayal, Walid; Penchel, Ricardo; de Andrade, Gisele; Boudet, Alain-Michel; Teulieres, Chantal [Reprint Author]
CS Pole de Biotechnologie Vegetale, UMR 5546, 24 Chemin de Borde Rouge, 31326, BP17 Auzeville, Castanet-Tolosan, France
teuliere@smcv.ups-tlse.fr
SO Transgenic Research, (August 2003) Vol. 12, No. 4, pp. 403-411. print.
ISSN: 0962-8819 (ISSN print).
DT Article
LA English
ED Entered STN: 1 Oct 2003
Last Updated on STN: 1 Oct 2003
AB Regeneration problems are one of the main limitations preventing the wider application of genetic engineering strategies to the genus Eucalyptus. Seedlings from Eucalyptus grandisXEucalyptus urophylla were selected according to their regeneration (adventitious organogenesis) and transformation capacity. After in vitro cloning, the best genotype of 250 tested was transformed via Agrobacterium tumefaciens. A cinnamyl alcohol dehydrogenase (CAD) antisense cDNA from Eucalyptus gunnii was transferred, under the control of the 35S CaMV ***promoter*** with a double enhancer sequence, into a selected genotype. According to kanamycin resistance and PCR verification, 120 transformants were generated. 58% were significantly inhibited for CAD activity, and nine exhibited the highest down-regulation, ranging from 69 to 78% (22% residual activity). Southern blot hybridisation showed a low transgene copy number, ranging from 1 to 4, depending on the transgenic line. Northern analyses on the 5-16 and 3-23 lines (respectively one and two insertion sites) demonstrated the antisense origin of CAD gene inhibition. With respectively 26 and 22% of residual CAD activity, these two lines were considered as the most interesting and transferred to the greenhouse for further analyses.

L16 ANSWER 11 OF 12 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 2002:534765 BIOSIS <<LOGINID::20061117>>
DN PREV200200534765
TI Biolistic transformation of ***Eucalyptus*** ***grandis*** X E. urophylla callus.
AU Sartoretto, Laudete Maria; Cid, Luis Pedro Barrueto; Brasileiro, Ana Cristina Miranda [Reprint author]
CS Embrapa Labex-France/Agropolis International, Avenue Agropolis, 34934, Montpellier Cedex, 5, France
anacmb@cenargen.embrapa.br
SO Functional Plant Biology, (2002) Vol. 29, No. 8, pp. 917-924. print.
ISSN: 1445-4408.
DT Article
LA English
ED Entered STN: 16 Oct 2002
Last Updated on STN: 16 Oct 2002
AB A procedure for genetic transformation of the hybrid ***Eucalyptus*** ***grandis*** X E. urophylla using particle bombardment is described. Cotyledon- and hypocotyl-derived calli growing on SP medium supplemented with 2 muM thidiazuron or on MS modified (MSM) medium supplemented with 10
muM 2,4-dichlorophenoxyacetic acid (2,4-D) and 2.5 muM 6-benzylaminopurine (BAP), were used as target material for bombardment assays. Multiple preincubation and bombardment conditions were tested. Tungsten particles were coated with the plasmid pBI426 harbouring a beta-glucuronidase (gus) and neomycin phosphotransferase II (npt II) gene fusion controlled by a double 35S cauliflower mosaic virus (CaMV) ***promoter*** : Four days after bombardment, the transient transformation efficiency was determined by expression of the gus gene. Fully GUS-positive calli were then obtained after 105 d in MSM medium supplemented with 2,4-D, BAP, and the selective agent kanamycin at 200 mg L-1. The presence of the gus gene in these kanamycin-resistant calli was confirmed by polymerase chain reaction analysis. Extensive experiments were performed aiming to identify conditions for the regeneration of these GUS-expressing calli. However, they were unable to regenerate transgenic shoots, suggesting that conditions suitable for regeneration are unsuitable for transformation and vice versa.

L16 ANSWER 12 OF 12 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 2000:426989 BIOSIS <<LOGINID::20061117>>
DN PREV200000426989
TI Cancer chemopreventive activity of euglobal-G1 from leaves of

Eucalyptus ***grandis*** .

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SO Cancer Letters, (July 3, 2000) Vol. 155, No. 1, pp. 61-65. print.
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DT Article

LA English

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AB In the course of our continuing search for novel cancer chemopreventive agents from natural sources, several kinds of Eucalyptus plants were screened. Consequently, the phlorogrucinol-monoterpene derivative, euglobal-G1 (EG-1), was obtained from the leaves of ***Eucalyptus*** ***grandis*** as an active constituent. EG-1 exhibited the remarkable inhibitory effect on two-stage carcinogenesis test of mouse skin tumors induced by 7,12-dimethylbenz(a)anthracene (DMBA) as an initiator and fumonisin-B1, which has been known as one of mycotoxins produced by Fusarium monifiliforme, as a ***promoter*** . Further, EG-1 exhibited potent anti-tumor-promoting activity on two-stage carcinogenesis test of mouse pulmonary tumor using 4-nitroquinoline-N-oxide (4-NQO) as an initiator and glycerol as a ***promoter*** .

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